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CLINICAL MEDICINE and SURGERY

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LEADING ARTICLES

Notes From 1,000 Cases of Asthma
By James Adam, M.A., M.D., C.M., F.R.C.P. & S., Glasgow, Scotland

Asthma A Toxicosis
A Rational Basis for the Management of Asthmatic Patients
By Burton Haseltine, M.D., F.A.C.S., Chicago

Detoxication Treatment in Asthma
By Alvin W. La Forge, M.D., Chicago

The Science of Nutrition and Its Applications to Clinical Medicine
By Victor E. Levine, Ph.D., Omaha, Nebr.

Types of Physical Constitution in Mental Diseases
The Schizophrenias
By T. J. Perkins, M.D., Jackson, La.

Studies in Photochemistry
(I. The Halphen Reaction)
By A. J. Pacini and R. W. Crosley, Biophysicists, Chicago

Clinical Suggestions
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The Medical Treatment of Prostatism and Metabolic Disorders
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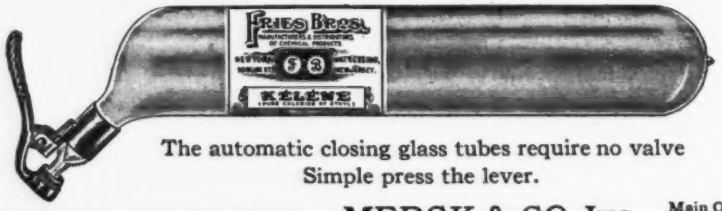

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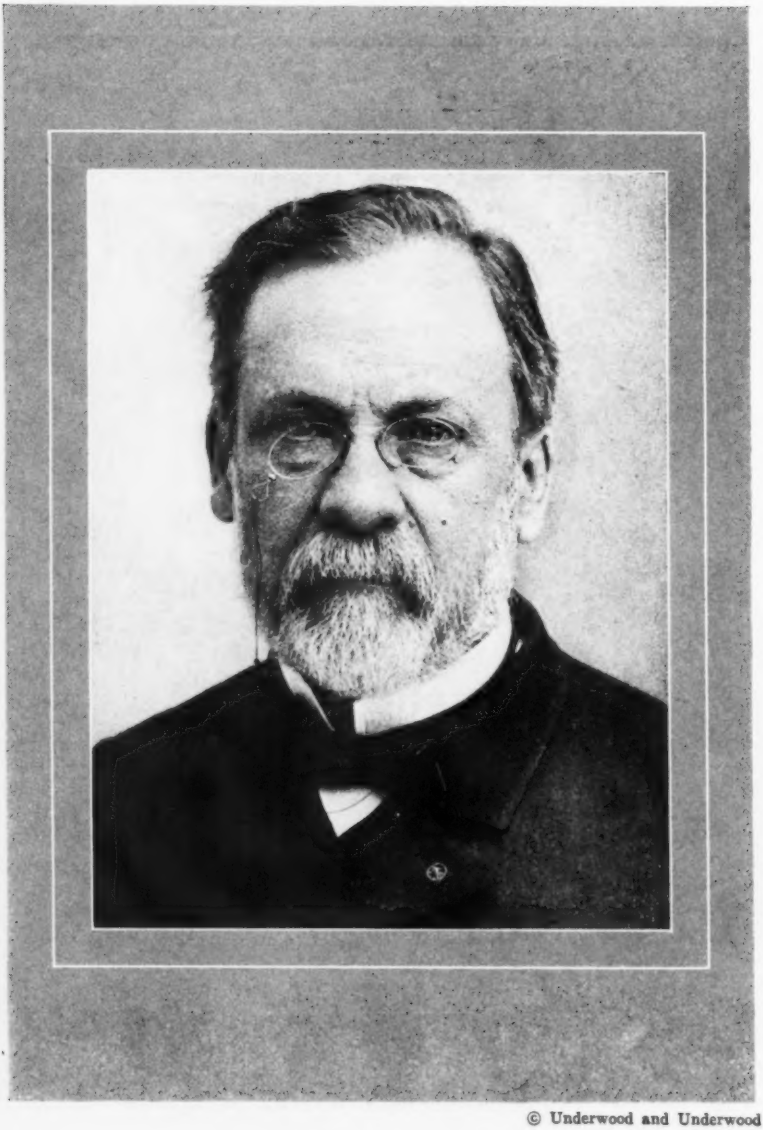

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LOUIS PASTEUR

THE DISCOVERER OF BACTERIA

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Louis Pasteur

EVERY time we wash our hands before we go to the table or scrub them before a surgical operation; every time we boil or chlorinate water to make it safe for drinking or put antiseptics on a wound or autoclave our surgical dressings, we are paying homage to the genius of Louis Pasteur.

Pasteur was born in the village of Dole, France, December 27, 1822. His father was a tanner, who had received the Cross of the Legion of Honor, for bravery, while serving in the French army. It was no small matter for a poor man like this to give his son the educational advantages which Louis received.

While the boy was small, his family moved to Arbois, where he went to school and college. Later he worked his way through the Royal College at Besançon, by teaching mathematics and physics. When he had abstracted the intellectual juices from this institution, he went to the Paris Normal School, where he seriously entered upon the study of chemistry.

It is difficult, at this time, for us to gain a genuine realization of the ideas regarding the origin of life, which were generally held, even by scientific men, so lately as the middle of the nineteenth century.

Spontaneous generation was almost universally accepted to account for the universal presence of flies and beetles in manure piles and for the undoubted presence of microscopic life in organic solutions which had been exposed to the air. Experiments were even carried out to prove that spontaneous generation actually took place! Van Leeuwenhoek and Spallanzani had quietly but rather thoroughly undermined these fallacious ideas, but it remained for Pasteur to make the final and conclusive demonstrations.

His first teaching appointment was as professor of physics in the *Lycée* at Dijon, and very soon afterward (in 1849) he was made deputy professor and, in 1852, professor of physical chemistry at Strassbourg.

In 1854 he went to Lille, as dean of the faculty of sciences in the University; and three years later was called to Paris as director of the Normal School. He also was a professor in the School of Fine Arts; professor of chemistry at the Sorbonne; secretary of the Academy of Sciences; and, finally, director of the Pasteur Institute.

As a chemist, he made many notable contributions to the knowledge of that science; but when he took up the study of fermenta-

tion he began laying the foundations for his future fame.

His first noteworthy work was done in ascertaining why, on some occasions, wine and beer, instead of going on to their normal condition, turned to vinegar; and why certain wines differed from certain others, made under similar circumstances in different parts of the country. The answer to these riddles was found in the fact that different types of microscopic life were found in the several types of fermented products under varying conditions.

Somewhere about 1860, the great silk industry of France was threatened by a disease of the silk-worms, and Pasteur was asked to investigate this. He found that a certain kind of microorganism was present in all silk-worms who had this disease, and worked out a way to kill the parasites.

From these researches it was, of course, only a logical step to the conception that microbes might prove to be the cause of various human diseases. Working along this line, Pasteur discovered the microorganisms of anthrax and chicken-cholera, and prepared "vaccines" against these diseases, as well as against rabies (the treatment is still called, in his honor, the "Pasteur treatment") and diphtheria. In 1864 he definitely announced the germ theory of disease, but his success in treating rabies was not achieved until he was 63 years old.

His discovery of protective vaccination with attenuated cultures was rather dramatic. While engaged in his studies on chicken-cholera, he was called away to investigate an outbreak of anthrax, and he left his cultures standing in the laboratory. When he returned, months later, he took up his work where he had left off, and inoculated several fowls with the old cultures. Much to his surprise, these did not die, as former animals had done, but, after a few day's illness, recovered. He then made fresh cultures and repeated his inoculations on these and several other fowls. All of the fresh animals died promptly, but those which had previously received the old cultures were not even made ill. From these phenomena, Pasteur's keen and powerful brain evolved the idea of prophylactic vaccination.

Pasteur was not only a student of wide vision and tremendous intellectual power, but also an able writer, so that the results of his monumental labors, in various lines, are adequately preserved to us. His tireless efforts were continued until shortly before his death, which occurred September 28, 1895. His bones now rest in a tomb in the Pasteur Institute.

We of today can scarcely appreciate the debt we owe to Pasteur, for his revolutionary discoveries, and to Lord Lister, who put them to practical use in surgery, but it is not too much to say that the whole edifice of modern hygiene, sanitation and preventive medicine rests upon the foundations which were laid less than seventy years ago by this brilliant and tireless genius and savant of France. He never received the degree of Doctor of Medicine, but our profession owes more to him than it does to all except a very few, if any, of our own members.

From compromise and things half-done,
Keep me with stern and stubborn pride;
And when, at last, the fight is won
God, keep me still unsatisfied.
—Louis Untermeyer.

BRONCHIAL ASTHMA

It is relatively only a very few years since the conception of bronchial asthma, in the minds of medical men, as well as in the public understanding, embraced merely a picture of an anxious-faced patient, sitting up or leaning slightly forward, holding to something with his hands, in order to bring his accessory muscles of respiration into play, and fighting for his breath in a manner pitiful to witness.

In those days, as today, people seldom or never died of asthma (in this connection, the distinction between true bronchial asthma and the dyspnea of advanced cardiorenal disease must be carefully drawn); but recovery was equally rare. The cause was unknown (more recently it has been attributed to some recondite individual sensitiveness of the general organism), and the physician's ministrations consisted, largely if not wholly, in applying palliatives when the attacks came on. In the milder cases, the fumes of powders, pastilles or cigarettes, consisting chiefly of the dried leaves of stramonium, belladonna, tobacco and other antispasmodic drugs, with or without an admixture of potassium nitrate, often gave temporary relief. Severe attacks were controlled by hypodermic injections of morphine and atropine and, more recently, of epinephrin solution. Ephedrine is now given by mouth, with good effect, in many cases.

Sometimes general treatment was undertaken, in a tentative manner and without

much conviction. Purgatives were used fairly regularly, and mixtures, containing as a rule, iodides or bromides, were administered to a good many patients, who, in spite of everything that was attempted, continued to have their attacks with more or less frequency and regularity.

Then came a group of honest and sincere workers who attributed the dyspneic attacks of bronchial asthma to allergy, and set about the treatment of the condition—for the first time with some show of scientific method—by immunizing the patients against one or more substances to which they showed evidences of sensitiveness, and by so regulating their lives and diets as to eliminate the offending substances, so far as possible.

Fairly good results were, and are, obtained by these methods, in some cases, but they have two rather obvious drawbacks—one scientific and the other clinical: First, no attempt was made to explain the underlying cause of the allergy; and, second, the elimination of such universally-used food substances as eggs or wheat is highly impractical, and immunity from attacks continues only during the maintenance of the rather rigid program which is often laid down, any slip being followed by a return of the distressing symptoms.

No one will ever know just when a light first began to break through the fog which surrounded the whole subject of bronchial asthma, nor who was the first man who ever thought of the paroxysms of bronchospasm as being merely one, rather late, manifestion of a state of general toxicosis. But among the first—if not the very first—to sponsor such an idea in print was Dr. James Adam, of Glasgow, Scotland, whose book on asthma is still a classic and has recently been reprinted in the United States. Not long thereafter, Dr. Burton Haseltine, of Chicago, began to talk and write along the same line, which was original with him, as he did not encounter Adam's book until after he had published several papers.

So far as we can ascertain, Haseltine deserves the credit for developing the conception that a case of asthma cannot be properly handled by any one man alone, but requires the close cooperation of a competent internist and rhinologist, at least, and frequently the expert services of one or more other specialists, in order to discover and eradicate the sources of the toxemia which underlies, not only the bronchospastic attacks, but also the allergy which is generally recognized as being at their root. He also emphasizes the fact that the treatment of asthma is an economic as well as a therapeutic problem, and that the only financial arrangement which is fair to both physician and patient is one involving a fee covering the entire management of the case, rather than upon the basis of the number of consultations or treatments.

We feel particularly fortunate in being able to present to our readers, in this issue, a rather complete epitome of this modern view of asthma, in papers by Dr. Adam, Dr. Haseltine and Dr. La Forge, one of the internists who has been most closely associated with this work. So far as we know, it is only by means of efforts of the type here discussed that the physician is able to offer to the asthmatic patient any reasonably-grounded hope of a cure, as distinguished from mere palliation.

The greatest of follies is to sacrifice health for any other advantage.—Schopenhauer.

THE A.M.A. MEETING

This year's meeting of the American Medical Association is to be held in the Middle West and in a peculiarly favorable place for those who feel that they must crowd as much self-education as possible into the time they spend at this meeting. Minneapolis is only three hours, by rail, from Rochester and the Mayo Clinic which, whatever one may think of it, should be visited, at some time, by every physician. Moreover, the time set for the meeting (June 11 to 15) is sufficiently late to give the Spring, which arrives tardily in our northern states, time enough to be in its full glory.

Medical meetings are a truly necessary part of the life and education of every successful physician, and the gatherings of the A.M.A. should be attended as frequently as possible, if the best results are to be attained.

There seem to be grounds for hope that this meeting will be especially valuable to general practitioners, as this matter was discussed at the annual conference of secretaries of the State Medical Associations, at which time the feeling was expressed that the programs and exhibits have been, in the past, somewhat topheavy with specialistic material. Dr. Morris Fishbein, editor of the *J.A.M.A.*, suggested that the reasons

why these meetings are not so valuable as they might be, were: too much golf, too much program, and not enough medical economics, sociology and actual, practical demonstrations of the new work being done in various lines.

Some complain that the management of the Association is all politics and that city specialists get all the official plums. If that is true, whose fault is it? The voters of Illinois have demonstrated recently that the ordinary people, if they rear up on their hind legs and take the bit in their teeth, can smash the most completely organized and intrenched political machine of this generation. The selection of the members of the House of Delegates is in the hands of the members of the County and State Societies, and if these men are carefully chosen and given instructions they will register the will of their constituents.

Most physicians do not take enough interest in Organized Medicine. If every doctor in the country would take a keen and active part in the work of his County and State Societies, the whole profession would be in a sounder and healthier condition.

Minneapolis is a comparatively small city for such a large meeting as this promises to be, and those who have not already made arrangements for hotel accomodations had best do so without a moment's delay. In fact, the best course to pursue, at this time, would be to write to Dr. F. G. Benn, 1114 Donaldson Bldg., Minneapolis, Minn., who is in charge of housing facilities for this meeting.

Those who cannot find a place to sleep can throw a tent in the car, drive up to Minneapolis and camp on the outskirts, with the whole family. It is a lovely country for such an expedition! If the wife enjoys social activities there are always plenty of pleasant arrangements for the ladies during these meetings.

The commercial and scientific exhibits are enough to make the trip worth while, for here one can actually see and handle the new drugs, instruments and apparatus and hear about them from men who know whereof they speak. Also, one gains first-hand information about what the laboratory men are doing and a knowledge of the workings of all the agencies which are promoting better health and longer life for the human race.

So mid-June is the time, and one of the "Twin-Cities" is the place where every physician who can possibly do so should meet his professional brethren and get a fresh start and new outlook for the glorious work in which we are engaged.

Theory is the best helper practice ever had.—Donald Hampson.

BEWARE THE SPARKLING BROOK!

There is an ancient superstition to the effect that a briskly flowing stream will promptly purify itself of any contamination which may enter it, and that fallacious idea has been the death of many people.

Oxygen is not a germicide, and the ultra-violet rays in the sunshine which may fall upon the water are too dilute to render it free from bacterial life. The self-purification of a river, which undoubtedly might take place, under ideal conditions, is a biologic process, akin to that which occurs in the bacterial-bed of a modern sewage disposal plant, and requires weeks or months of time and hundreds of miles of flow, if the pollution has been at all heavy.

The reports of the U. S. Public Health Service state that there is not a river of any size in the United States whose waters are fit to drink without first being subjected to chemical or thermal sterilization. If one were camping high up in the mountains, above any human habitations, one would be safe in drinking directly from a brooklet. Under other conditions, such a course would be unjustifiable.

It is impossible to tell from the appearance of water, or even from its odor, whether it carries dangerous bacteria. A cup of water from a sparkling, laughing stream may be a cup of death!

Physicians should warn their patients and the public in general of this danger, especially at this time of year, when many are enjoying the delights of the open road. How foolish to risk a serious illness, or even death, for the sake of instantaneously satisfying one's thirst! A few minutes of boiling or the addition of ten or a dozen drops of tincture of iodine or a tablet of one of the chlorine-carrying antiseptics, such as halazone, will render a quart of polluted water harmless.

People who habitually *insist* on taking chances (and they are many!) should be urged to take the typhoid prophylactic before starting on their vacations. It would be a wise plan for everyone to be so protected.

Let us enjoy the "great outdoors" with all our mights during the summer season—the more the better; but let us conduct ourselves in such a manner that we will live to enjoy such pleasures for many years to come.

One of the most comforting places to spend a vacation is just inside your income.—*Income.*

"RACKETING" THE MEDICAL PROFESSION

Chicago seems to be a particularly umbrageous haunt for "racketeers," if, indeed, this species thrives anywhere else.

A "racket" consists, so far as we are able to ascertain, of the formation, by certain astute and unscrupulous individuals who feel the need for ready cash, of a "union" or "society" in some trade or professon, followed by efforts to compel persons in this line of work to contribute money to its alleged support, using intimidation by threats of personal violence, property damage or even death. These societies have no connection with legitimate labor unions, and the supposed benefits to their members prove to be largely, if not wholly, imaginary. The money collected appears to go into the pockets of the organizers.

We have recently read of "rackets" among the junk dealers, shoe repair men and others, in which refusal to join the gang was punished by bombing the contumacious person's place of business, maiming him physically or killing him, as occurred not long ago in connection with the junk dealers' "racket." An effort seems to have been made recently to levy tribute upon dentists and dental laboratory technicians, in which it is reported that those who refused to join were threatened with having their hands broken, so that they could never practice their profession again.

And now the physicians have been picked out as grist for some such kind of mill. A "league," under the guise of a "union," is proposed, to collect old accounts and prevent the accumulation of new bad accounts, combat state medicine, stop the abuse of medical charity and accomplish other desirable things. The prime mover and business manager of this league is a notorious "racketeer" who recently "organized" the window washers along these lines.

But they reckened without the Chicago Medical Society! The officials of this organization saw the Senegambian in the fuel and went after him, tooth and nail, taking such steps as would enable them to proceed legally against the "racketeers," and undertaking to protect the members of the society who would cooperate with them against any depradations.

This incident shows two things and points two lessons.

The persons and gangs who prey upon society, in various ways, look upon doctors as "easy meat," when it comes to business matters and are ready to exploit them whenever and however then can; and the well-organized, active and wide-awake medical society is the natural answer to such insidious propaganda.

The lessons are, that each physician should learn enough business sense not to be a lamb when he falls among wolves; and that *your* medical society, if now sleeping, should be galvanized into life so that it can help you fight your battles when you need help badly.

Too many people think opportunity means a chance to get money without earning it.—*Milwaukee Leader.*

DIGGING GRAVES WITH THE TEETH

A thoughtful man once remarked that people rarely lose their health—they throw it away.

We have heard a great deal of talk, in years past, about "temperance," and when the word was used it almost invariably referred to indulgence in alcoholic beverages—or rather abstention from such indulgence. We rarely hear the word any more, though there are still many temperate (if law-breaking) users of wine and spirits, who say little. Most of the vociferous talkers are those who drink up all the bootleg hootch they can lay hands upon, and the ones who feel that taking a drink of whiskey is a *crime*, in the same class with rape, arson and murder. Both these classes of persons are equally *intemperate*.

The recent sudden death of a prominent politician, Senator Willis, of Ohio, has called attention to the fact that the good, old-fashioned word, temperance, applies to other matters in life besides ethylic indulgence. As a matter of fact, it is probable that, even in the palmiest days of the saloons, more suffering, illness and incapacity resulted from intemperance at the table than ever were caused by the abuse of strong waters.

It is true that, among sane and thinking people, there is a tendency toward a

more rational and hygienic practice in the matter of eating; but the number of those who habitually eat to repletion, three times a day, is still appallingly large.

Within the last few years the deaths of two other prominent men, besides Senator Willis—President Harding and William Jennings Bryan—have been attributed to their unbridled appetities for food. Certain it seems to be that all three were ponderous eaters, even though they had reached an age when there was no physiologic justification for such overindulgence.

On the other hand, the late Wayne B. Wheeler, of the Anti-Saloon League, erred, characteristically, in the other direction and met his physical end because of an intemperate *reduction* in his diet. Temperate, remember, means "moderate; not characterized by passion".

In addition to these outstanding national figures, scores of men, who were active athletes in their college days, die annually, just at the hither edge of middle-life, because of their failure to adjust their appetites to their circumstances. And the roster of those who are chronically ill and relatively inefficient because of dietary indiscretions, runs into the hundreds of thousands—if not millions.

The condition of those ill-advised young women who, of late, have been intemperately denying themselves adequate food, in a passionate endeavor to achieve the lank and undifferentiated figure which has been, temporarily, popular, deserves no more than this casual mention. It is an evanescent phenomenon which, in the nature of youth, will soon pass. It is the other side of the picture which requires emphasis, for gluttony has been in vogue, whenever possible, since the dawn of history, and the tendency to intemperate overeating appears to be inherent in that barbarous part of man's nature which seems to make up so large a part of the equipment of most of us.

What, then, is the reasonable and civilized rule in regard to diet?

Generalties are different and, in regard to details of personal conduct, wholly impossible and indefensible. Broadly speaking, however, it is safe to say that the man who will make a *horizontal reduction* of twenty-five percent in his alimentary intake, when he reaches the age of thirty years, and another equal reduction at forty, so that he is eating only half as much as he ate when he was twenty, will rarely go far wrong. This does not, of course, apply to men such as lumber-jacks, stevedores, steel moulders and others who are engaged in heavy, physical labor every day.

As to *what* a man shall eat, that is his own personal concern. Unless he is definitely ill with some metabolic disorder, such as Bright's disease or diabetes (in which case his physician should prescribe his diet very carefully) he may safely eat whatever he pleases, so long as he eliminates the articles which experience has proved are *unsuited to his individual constitution*, and includes a sufficient amount of roughage and the vitamine- and mineral-carrying foods to maintain his physiologic equilibrium. For reasonably healthy and normal people, quantity is probably of more importance than quality.

Those who fail to use common sense in the study and regulation of their diets are, in the homely and time-worn phrase, "digging their graves with their teeth," and collaborating effectively in the work of the ever-active and too-little-appreciated Fool-Killer.

We spend more on almost any article of bodily aliment or ailment than on our mental aliment.—Henry D. Thoreau.

ART AND THE PHYSICIAN

It has been wisely said that, even in this day of extensive and intensive scientific research, the practice of medicine is more than fifty percent art. So long as men remain complicated, variable and sensitive individual organisms, with emotions, minds and souls, as well as physical bodies, it is earnestly to be hoped that this ratio will be steadfastly maintained. When humanity as we know it becomes or is replaced by Robots it will be time for rigidly scientific medicine.

But the physician is, or should be, interested in art from several other standpoints than that implied in the art of Medicine.

What is art? The Indian philosopher, Jinarajadasa, declares that it is the way an individual expresses his reaction to the ever-varying pressures of our changing life, and a practical method for seeing the world as *idea*, thus offering a means of escape from the hard and merciless conception of the world merely as will or energy.

That may sound a bit abstruse, but when we ponder it we find several practical applications for such a conception.

We all realize that most of the world's unhappinesses and departures from normality result, directly, from the maladjustment of the individual to his surroundings or have, as a major factor, repressions, frustrations, fears and other psychic distortions, arising from his failures to understand and dominate the conditions of his life. If art will give a man a new viewpoint and a safe and reasonable outlet for his inner forces it will prove inestimably valuable to hosts of strugglers with intangible, but none the less potent, forces.

Among the great urges which drive men into action, the creative impulse is among the two or three most powerful; with many it stands first. The most primitive outlet for this tremendous energy is sex activity but, in civilized communities, this method of expression is considerably limited by social conditions and the consensus of public opinion.

We hear much, of late, about the "sublimation" of the creative impulse and the substitution of sex enthusiasm by other forms of activity. One fundamental point is here overlooked by many. Heavy physical toil can so exhaust the general body mechanism that no energy will be left to activate the genital organs; but this is not substitution; it is temporary destruction. If the sex impulse is to be sublimated and given an outlet on what we are pleased to call "higher planes," it must be by means of *creative* activity—not by merely physical or mental drudgery. This is one of the great functions of art, in all its many forms.

When one uses the word, art, the hearer is apt to think only or chiefly of painting and sculpture. This is a narrow and unwarrantable interpretation of the word. Art includes all the ways in which a man can express his individuality and give to others some understanding of what he finds within himself, in his higher moments. Music, poetry and other forms of literary effort, etching, ceramics, photography, cabinetmaking and many other forms of expression are, or may be, art, in its broad sense.

In all the socalled learned professions there is a strong tendency for their followers to develop a degree of narrowness of outlook and a certain contempt for and lack of understanding of the beautiful and "illusive" things of life. This is particularly true of the medical profession, whose votaries are constantly and deeply immersed in the contemplation of abnormalities and perversions of structure and function and whose time, thought and energy are so closely occupied with the day's duties that, scarcely lifting their eyes from the pages of the book of human suffering, they are in danger of developing spiritual myopia.

One need not be a world-famed painter or sculptor or poet in order to be a true artist. Every one of us has within him the seeds of possibilities in this line; and he who would achieve happiness, freedom and that large measure of satisfying accomplishment which is true success, must water these seeds and fertilize them with the sweat of his soul, so that they may be brought to blooming, if only for his own personal joy.

Every man and every woman should have an emotional outlet of this sort. Almost everyone can sing a little; most people can learn to play some musical instrument or draw or paint, after a fashion. Pottery, weaving and embroidery appeal to some. Illiteracy is becoming rather rare in this country so, while a generation produces only a score of great poets, essayists, novelists and playwrights, there are few who, with reasonable effort, cannot write sound—if uninspired—verse or learn to express their inner activities more or less adequately by means of the written word.

The physician—or any other man, as a matter of fact—who has no "hobby"—no fortress into which he can retreat when the storms of life lash him too violently—is in a deplorable state and is in danger of ultimate failure, not alone in his chosen line of work, but also as a human being.

In one's younger years one does well to cultivate a hobby involving physical exertion; but the day will come when strenuous activity of the body will no longer be wise or possible. It is then that the man who has been training his powers of creative expression, in the line best suited to his talents, finds not merely solace, but a keen and high excitement in the exercise of his cultivated faculties—a worthy and enduring outlet for the urge to creative activity which animates the entire manifested universe, from the atom to the highest expressions of life.

Every physician should be an artist, of the type best suited to his temperament and abilities. Many are already such. The list of painters, sculptors, poets, novelists, essayists, musicians and other creators in the medical profession is a long one and sufficiently familiar to require no catalogue.

And once having felt the upsurge of delight which comes from measurably complete self expression, no man can refrain from communicating his wonderful discovery to others, thus enriching his own life, who gives, and those of all the fortunate ones, who receive this beneficient gift at his hands.

The physician is, at the bottom, a human being and will be a better physician as he is a larger, richer and riper human being.—Dr. Nicholas Murray Butler.

Let us add to our nature a sensitiveness to art, and then we shall understand life with a fuller meaning. —C. Jinarajadasa.

THE TIME TO STUDY

There are men who seem to be natural students—who study whatever is available for study, day by day, with the greatest avidity and joy; and there are others who spend only such an amount of time with their books and journals as they conceive to be absolutely necessary to keep them sufficiently familiar with the newer developments to satisfy the requirements of their patients. We are not considering those who do no studying whatever, as they should not really be considered in the class of professional men. They are merely day-laborers, working for a living.

For those who desire to utilize to the best advantage such time as they have at disposal, so as to make sure of keeping up at least with the minimal amount of study which will insure efficiency, what is the best time to study?

The answer to this question must be an individual one, but, in general, it is safe to say, "Whenever the opportunity offers." It will not do to wait until one encounters a case of pneumonia or encephalitis or strangulated hernia before deciding on a definite course of treatment in such acute conditions. When a man is acutely ill, he needs something done for him *now*, not after the authorities have been consulted. In chronic maladies, like tuberculosis, epilepsy and pernicious anemia, one can do a good deal of reading, after the patient is first seen, before the treatment of the case is finished.

A good time to study any particular disease is just after one has finished treating a case of it. If careful records are kept (as they always should be!), they can be compared with the discussions in the textbooks and the reports of other workers, in the periodical literature, and any rough or hollow spots in one's technic of diagnosis and treatment can be smoothed out or filled in, in preparation for the next similar case.

None of us is a peripatetic encyclopedia, and not infrequently we all find it necessary to consult a compend or synopsis, to help us out of a tight corner. We should not, however, let the matter drop at that. When we have found a hiatus in our mental equipment which requires the use of a compend to forestall disaster, temporarily, we should occupy the first free hour or two in studying up the subject on which we are weak, in the best books available.

No hard and fast program of study can wisely be made out for another man. Personal conditions and habits must be met. But there are a few fundamental points which ought to be helpful to any student, in planning his mental activities to meet his own needs.

First, more progress will be made by studying for fifteen to thirty minutes, *every day*, than by putting in half a day at it, once or twice a month—unless, of course, one is preparing a paper, getting ready for an examination or posting oneself for some other emergency. Under such circumstances, the long pull of study may be necessary.

Second, it will be much easier to study if one does it regularly, at the same time of day and in the same place—even to sitting always in the same chair when studying.

Third, it is better to take one subject at a time and make oneself reasonably master of it, than to skip about from one thing to another. An exception to this rule is that the man who would be well posted must select at least one monthly professional journal and read each issue from cover to cover, in order to get a birdseye view of medical progress and glean practical pointers which he can use in his daily work.

We would not presume to make out a hard and fast study schedule for any other man, but we do emphatically urge every physician to make out such a program *for himself*, and then *follow* it with a devotion akin to fanaticism.

Leading Articles

Notes from 1,000 Cases of Asthma.

By JAMES ADAM, M.A., M.D., C.M., F.R.C.P.&S., Glasgow, Scotland.
Hon. Surgeon for Diseases of Ear, Nose and Throat, Glasgow Royal Infirmary, Etc.

AN ANALYSIS of a thousand cases of asthma can be made interesting and instructive, but what the practitioner mostly wants is clinical facts and especially clinical results. He hears of various theories and of still more heterogeneous methods of treatment; what he wishes to know is how these theories and methods work out, clinically and therapeutically, and how to handle a given case; also, when he may expect to fail and when to succeed. It may help to meet this legitimate desire if, instead of giving an elaborate analysis, I simply give a short record of cases where the results of treatment happen, for various reasons, to have come to my knowledge during the first two months of this year. Some of them are old cases of whom I had not heard for many years, some of only last year's date; but *none is selected;* each has its own lesson.

In order that the reader may draw his own inferences, let me say that asthma in these cases has been regarded and treated as a *toxicosis* accompanied by, or resulting in, vagal irritability; that the treatment has aimed at the reduction or abolition of this toxicosis and irritability; and that, to this end, attention is paid to diet, cookery and outdoor exercise, to the proper functioning of the whole digestive and respiratory tracts and, therefore, to the whole vagal area, and especially to the orifices of these tracts, the mouth and nose. Oral sepsis must be dealt with; nasal sepsis is not always present but is oftener present than is imagined and must be eliminated. Nasal irritation due to contact of the opposing walls must be kept under, so as to reduce respiratory reflexes of nasal origin to a minimum.

Accordingly, treatment varies with the case; but all patients get a mercurial, weekly or oftener, and are ordered three meals daily, with directions as to cookery, abundant water between meals, and abundant open-air exercise. To tide them over the earlier weeks of treatment they are usually given a mixture of iodide and belladonna, sometimes a stomachic; a daily movement of the bowels is imperative.

Although the family history has always been investigated, more stress has been put on nurture than on heredity, unless there is a history of distinct idiosyncrasy; and on the general toxic state rather than on anaphylaxis. In each case an effort is made to find out the factors conducing to asthma, and to treat them accordingly; often this means an alteration of habits, mental and physical—a thing sometimes difficult to attain.

The first two cases are interesting proofs of the importance of nasal as well as general hygiene.

Case Reports

Case 1.—A man, now aged 40, whom I had not seen for years, came to me (February) on account of acute laryngitis and maxillary sinusitis (now cured). He originally came in 1918 because of asthma of 27 years' standing, treated by a dozen doctors without benefit. Attacks occurred every second or third day, usually about 6 A.M.; he took too much tea and coffee, had much flatulence, badly septic teeth, little open-air exercise and much nasal obstruction from septal deviation. These points were all attended to, and because he is faithful to instructions he has had no asthma for ten years, except for one slight attack at the outset of treatment, while he was without teeth.

Case 2.—A lady of 52 comes (January) on account of recurrence of asthma and nasal polypi. She says these two conditions have always been concurrent; when rid of the polypi she is rid of the asthma.

She first saw me in 1905 for asthma of 6 years' duration; nasal trouble had existed from infancy. Hypertrophy of the turbinals and of septal tubercles and maxillary sinusitis were found and treated. In 1908 it was noted she had had no asthma for two years; in 1911 she still remained

well. Her weight in 1905 was 137 lbs., rose to 158 lbs. when her asthma disappeared, and remained so until July, 1927. In 1920 and 1923 asthma came with a recurrence of polypi, and went with their removal. In 1927 there was again recurrence of both. The patient has also been careless as to general treatment, has lost weight, and has again been put on a regime; her nose is still under treatment.

Case 3.—This case, while showing the importance of the nasal factor, also shows the folly of isolated specialism.

A man came in August, 1927, complaining of 5 years of asthma, ascribed to influenza. Attacks occurred, usually, at 3 A.M. He took no outdoor exercise, and had constipation and much flatulence. In 1925, a physician had found gastric hyperacidity, and for five months treated him accordingly, with distinct improvement, both as to gastric and asthmatic symptoms, but they recurred and continued.

I found his antrum pouring thick, stinking pus, night and day, into his stomach, and did a Denker operation, with some improvement, but it was not until after drastic detoxicating treatment, on La Forge's lines, that the asthmatic symptoms disappeared. By the end of February his eosinophilia was reduced from 16 to 4 percent and erythrocytes from 7½ to 5½ millions. The gastric acidity is still rather high.

It is to be noted that, as this man is of a morbidly religious turn, he would not indulge in the outdoor games or exercise on which I usually insist, and which prove so helpful to an asthmatic.

Case 4.—A teacher, then 29, came in 1915 complaining of slight wheezing and tightness during the previous 7 years, and especially of chronic urticaria, amounting to dermographia, of like duration; also of flatulence and constipation. She led the indoor life.

Habits were altered; her digestive tract and her nose, crowded by an enlarged middle turbinal, were attended to; a weekly blue pill was ordered. She has been quit of these troubles for over ten years.

Case 5.—A girl of 22 came in February, 1927, because of four years of asthma, worse after dinner, at menstruation and at the week-end. There is no family history of asthma and the personal history suggests that the asthma began with an indoor life and the onset of puberty; the eosinophilia was 5 percent.

The turbinals needed reduction and the left bulla, which was becoming polypoid from pressure, was removed. Her mode of life and diet were altered, and a weekly blue pill prescribed.

Improvement was prompt, but asthma tended to recur at menstruation. For the week before the menses a nightly dose of sodium bicarbonate was given, and in addition, half that dose twice on the day before the flow. There has been no asthma for three months.

Case 6.—A cultured Chinaman who came to see me in October, 1926, has just written from Peking to say that he is no better. His history, like that of the preceding cases, is interesting for the light it throws on the origin of asthma. His age was 44; his asthma and hay-fever, of 21 years' duration, began a year after he went to college in the United States, probably as the result of a strenuously intellectual life, continued from childhood and now intensified. He was always free from asthma in the Alps above 6,000 feet, but aways worse in the Alps, below 5,000 feet, than in London. His nose was good; 150 skin tests, done elsewhere, were negative, except possibly that to ragweed; he was underweight.

I had him only a fortnight—not nearly long enough to make good in such a case. His Alpine experience suggests sensitiveness to pollen, but should not blind one to the pernicious influence of hard mental work, 12 to 14 hours daily, between the ages of 7 and 22, with consequent lack of physical culture during those plastic years. Metabolic derangement was inevitable.

Case 7.—An undergrown boy of 14 came in October, 1926. His symptoms began as bronchitis at 3 years; he was not able to go to school until 7 years old. He had the operation for tonsils and adenoids at 5, and one on his nose at 6, without benefit to the asthma. Eosinophilia was 14 percent.

His diet, which was bad, was altered; his deviated septum, which occluded the left nostril, was put right; a weekly mercurial, a morning tub (cold) and outdoor exercise were prescribed.

One attack of asthma last summer is all that he has had in a year, after 11 years asthma, occurring almost daily and keeping him in bed for three months before his first visit.

A doctor, calling on other business, tells me of two cases he had sent me.

Case 8.—A lady of 50, with asthma for six years, came in October, 1927, with her nose crammed with polypi and the bulk of her cartilaginous septum gone, owing to a bungled resection; there was pus in her left ethmoid. Polypi had been first removed 18 years ago, and then yearly till 1917, when her septum was resected; there had been two operations for polypi later. She had had hay-fever in childhood; she thinks she cannot take meat without asthma.

Removal of polypi, electrolysis and argyrol packs to the nose, and general treatment similar to that already mentioned, have rendered her asthma-free; but for the septal hole her nose looks normal. She says this is the first spring for ten years she has been able to go out every day in the east wind without asthma, catarrh or dermatitis.

Case 9—A boy of 15, with a lifetime history of asthma and an eosinophilia of 9 percent, said to be sensitive to eggs but found negative on skin-testing, has remained well for three months.

General treatment was given, similar to that in case 7. The turbinals were reduced by deep cautery puncture.

Case 10—A letter from Belfast says that a lad of 19, with a lifetime's asthma, who consulted me in August, 1927, and who had attacks every two or three weeks, knocking him off work, has remained free except for one slight attack coming after a soaking while playing football. He has not lost a day's work since I saw him.

The value of exercise for asthma is emphasized by the whole history of this case:

Age 6 to 10: Kindergarten, with more play than lessons; asthma slight.

Age 10 to 12: Ordinary public school, home lessons; asthma bad; off school 6 months.

Age 12 to 16: Boarding school in England, abundant games; almost no asthma.

Age 16 to 19: Office life; recurrence of asthma.

Since August, 1927: Weekly football, etc.; one slight attack.

Case 11.—This case, also sent from Belfast at about the same time, by the same doctor, gives an almost identical history as to the value of exercise—a story almost startling in its parallelism but omitted for the sake of brevity.

This lady of 38 had had asthma for 36 years, waking her, latterly, every morning at 3 o'clock. Attention to exercise and diet were the chief measures employed.

Except for slight "tightness" for half-an-hour on waking, at 7 A.M., she remained fairly well until a physician, alarmed at her thinness, gave her large doses of glucose, which caused edema. It has since been discovered that she has a streptococcal infection which is still under treatment. Her doctor (Dr. Hogg) writes: "I have tried your treatment on several patients with very great success"—a statement repeated by Dr. Harrington, of North Shields, in a letter received by the same mail.

The next two cases are those of a father and son, neither of whom has been too particular about following directions. Both are architects, and architects are rather prone to asthma because of the indoor life.

Case 12.—The father, then aged 34, came first in 1904, complaining of frequent head colds and asthma. He had purulent ethmoiditis and polypi, requiring repeated operations, and once or twice had hemoptysis with pyrexia. For years he has had no asthma, although he has had several attacks of bronchitis.

Case 13.—The son, now aged 22, had asthma and inveterate eczema for most of his life, until he took his diet properly in hand, then the condition promply improved. The asthma has quite disappeared since he joined an artillery corps and has had vigorous horse exercise weekly.

The next two cases are permanent mouth-breathers with deformed chests—a type I have never been able to help much.

Case 14.—A woman of 32 years, 65 inches tall but weighing only 90 lbs.; has had asthma since she was ten years old. She has occasional attacks of pyrexia and slight hemoptysis; has purulent sputum, yielding streptococci but not tubercle bacilli; has a doubtful spot at the right apex but shows no bronchiectasis on lipiodol injection. She was first seen in December, 1926, and is still under treatment. With systematic inversion and a vaccine, the sputum has decreased from 8 to 1½ ozs. daily. The asthma has improved.

Case 15.—A girl of 20 had had asthma for ten years when she first saw me in 1926, attacks occurring daily since she took to office life. Though measuring 67 inches, she weighed only 97 lbs. Attacks are typical, worse at menstruation, and are accompanied by very little sputum. There is hyperacidity, marked ptosis and dilatation of the stomach, ptosis and stasis of the colon, and probably some fibrosis of the lung. Many sorts of remedial measures,

nasal and others, have been tried, sometimes with temporary, but without permanent benefit. She is still under treatment.

Case 16.—A boy of 8 years, brought up on artificial food, had had asthma for 4½ years when he was brought to me in 1915. He had regular week-end attacks. Instructions as to diet and exercise and the usual mercurial have made a man of him, free of asthma for many years.

The same result from the same measures is happening with the two following cases, both boys.

Case 17.—A boy of 6 years whose asthma began after measles, whooping-cough and pneumonia at 2, came in 1926. He was overfed, especially on meat, and had an eosinophilia of 10 percent. His inferior turbinals were reduced by deep cautery puncture (a method which saves the cilia). The tonsils and adenoids operation had been done before I saw him, without benefit to his asthma. This boy is practically well.

Case 18.—A boy of 13, whose asthma began after diphtheria at 6; eosinophilia 13 percent; he has hay-fever; his father has asthma. Note the personal history indicating extreme vulnerance and consequently the need for great care in so ordering the boy's life as to convert this vulnerance into resistance, and in relation to this vulnerance, note the fact that the boy is an only son. Whooping-cough, followed by pneumonia, occurred at the age of six months, and that was followed by recurrent bronchitis; eczema in infancy; measles and chickenpox at 5; diphtheria at 6; German measles at 6 and 11; mumps at 7 and 11; pneumonia at 12. His nose has needed treatment. This boy came last September, and has been free of asthma for months.

Again let me emphasize that these cases are not selected; a few more whom I have chanced to meet might be added, but space forbids and there is no need to multiply.

The lesson is the same throughout—the value of exercise, of a careful diet, of attention to the nose and mouth. In short, let the asthmatic order his life aright and do so like a religion; he cannot afford to be slack, to take liberties open to other men. Often he says his work or circumstances will not allow such a regime, and to the straight and narrow way he prefers other paths—tempting shortcuts strewn with vaccines and antigens!

Asthma a Toxicosis

A Rational Basis for the Management of Asthmatic Patients

By BURTON HASELTINE, M.D., F.A.C.S., Chicago

A GROUP of physicians in Chicago have for about fifteen years treated bronchial asthma by methods radically different from those used by the majority of clinicians and apparently with a larger measure of success. These methods have been described and the clinical results published from time to time and great interest has been shown, both in America and in Europe. Because of this increasing interest it has become impossible to answer, individually, the questions that are being asked by physicians regarding the details of this method. Most of these questions can best be answered through the literature.

It will be helpful, as a first step, to correct one error that seems widely to prevail; namely, the belief that the method includes some new discovery or some exclusive information not known to others in the profession. In our treatment of asthma we have no secrets nor private formulas. We make use of no facts not available to any physician, although we emphasize certain facts and employ some procedures that have been too commonly neglected. Our contribution, if any, consists only in a clearer definition between fact and speculation in the asthma problem and a more coherent and successful utilization of facts when so defined.

Our recognition of the underlying factor in asthma as a toxic state is in accordance with modern biochemical knowledge and fully agrees with the ideas of Adam, of Glasgow, who has proved the existence of what he calls the toxemic basis of asthma. Our understanding of the phenomenon of bronchospasm as a modified reflex is in perfect accord with the conclusions reached by Brodie and Dixon, as the result of their classic work done in 1903 and published in the *Transactions of the London Pathological Society* for that year.

Nervous Mechanism

Our explanation of bronchospasm as a trigemino-vagal reflex is based on well

known anatomic facts and is accepted by neurophysiologists everywhere. Since we know that the immediate inciting cause of the bronchospastic storm is usually a stimulus to the vagus, from a peripheral source, we have a great clinical help in finding and removing this exciting cause. There is complete agreement here in the evidence coming from five different sources of information: (1) Anatomically, there is a close connection between the fifth nerve and the vagus; (2) experiments of Brodie and Dixon, upon animals, showed that bronchospasm is produced, in susceptible individuals, by irritation of these areas; (3) it is checked by anesthetizing the same areas; (4) pathologic changes are frequently found in these areas, in asthmatic patients; (5) correction of these conditions results in marked diminution and often complete cessation of the bronchospasm.

Metabolic Conditions

The degree of local tissue change or the amount of local irritation required to produce bronchospasm varies with different individuals, and in the same individuals it varies from time to time. This variation corresponds quite colsely to the variations in the degree of the underlying toxic condition. In a crude way this is observed by all clinicians. If an asthmatic patient has poor carbohydrate metabolism, he is almost certain to have more asthma following the ingestion of excessive sweets; if he has poor gastrointestinal function, he has severe asthma when constipated and is relieved by catharsis; if he has a focus of infection, he is worse when drainage is poor and obtains some relief whenever an important focus is removed. These facts are common knowledge.

By our more refined methods of study we are able accurately to observe these variations in the toxic condition and, to a great extent, to control them, with corresponding clinical improvement. In addition to a thorough clinical examination of the patient we study the blood-chemistry and make frequent quantitative uranalyses, always with the patient's fluid intake strictly regulated. By these measures we are able, not only to estimate with considerable accuracy the degree of the toxicosis, but to determine, to some extent, the relative importance of its various causative factors.

To illustrate: If we find an excessive acidosis (shown by uranalysis), with perhaps a high non-protein nitrogen in the blood, we suspect that this patient's toxic state is from a bacterial cause and, if the eosinophilia is high, we know he has a chronic mucous membrane infection. If we have an increased reducing power shown by the urine, we know that his toxicosis is, at least in part, due to faulty carbohydrate metabolism. If we find the ethereal sulphates in excess, we know that intestinal fermentation is a factor in the case. If endocrine dysfunction is shown, either by clinical signs or metabolism tests, we know we have an endocrine factor in the toxicosis and we try to determine to what extent the endocrine dysfunction is causative and to what extent it is a result of infection.

Dietary faults, when present, are corrected, but it is not necessary to restrict any patient's diet to the point of lowering general nutrition. This method contrasts strongly with the various starvation treatments for asthma which have occasionally been exploited. It is true that almost any asthmatic patient will experience relief of spasm if all food is withdrawn for a time. Adam has shown in a striking manner the relation between over-eating and toxemia. This is especially exemplified by his socalled week-end asthma in industrial workers. He combats this form of toxemia by diet restrictions and by mercurials, at suitable intervals, indefinitely continued. Weger, of Redlands, California, has had considerable success with his method of detoxication by starvation, which he employs even in patients not considered to be over-eaters. It is obvious that the limitations of this method are very narrow and that it is dangerous to patients of low vitality, as is the case with most asthma sufferers.

We are able entirely to avoid both horns of this dilemma. We can correct dietetic faults and detoxicate without impairment of nutrition, and we can reestablish normal intestinal function so that no mercurials nor other purgatives are required at any time. The procedures by which these results are accomplished have been described in previous issues of CLINICAL MEDICINE.*

Allergy

We fully appreciate the importance of the phenomena now known as allergic and we carefully observe the clinical evidences of this condition. We have watched closely the

*La Forge, Alvin W., CLINICAL MEDICINE, December, 1924, p. 827.

excellent work done by many researchers in the field of allergy and have shared in their disappointment that the clinical results have been so meager. We differ from all these investigators, in that we regard the allergy, not as a primary cause, but as only one of the manifestations of an underlying toxic state.

All observers have noted that the degree of hypersensitiveness is subject to wide fluctuations in the same individual. It is astounding that this has not suggested to any allergist that there might be discoverable, and perhaps removable, causes for these varying degrees of allergy. We have demonstrated that such causes are usually discoverable and frequently removable, with resulting complete and lasting cure of the allergy.

The importance of this difference is greater than is at first realized. It radically changes our conception of the problem, provides a wholly new line of approach to it and enormously increases our success in dealing with it. It is admitted that only about 50 percent of asthma patients can be shown to be allergic. This automatically limits the use of anti-allergic treatment to about one-half of the cases. No such limitation exists for detoxication methods, because a toxic state can be demonstrated in practically all asthma patients, of both the allergic and the non-allergic type. Furthermore, with successful methods of detoxication, allergic symptoms diminish, along with all other clinical manifestations.

It thus becomes apparent why we are indifferent to the various substances to which the patient may be sensitive. If we can correct the underlying abnormality we remove the hypersensitiveness to all these substances. We can do this in a higher percentage of cases than is claimed for any form of antigen treatment, and this result is in no case affected by the fact that previous antigen treatment has failed.

In true bronchospasm we have, besides the general toxicosis, a factor of peripheral vagus irritation, and prognosis depends largely upon the extent to which this is discoverable and removable. It is practically always, in the beginning, nasal and, if given correct treatment early, the results are complete and lasting. No patient can frequently undergo the ordeal of bronchospasm without developing pathologic changes in the bronchial mucosa, which may, themselves, be sufficient to incite the spasm, since the connection with the vagus is direct. While this observation is self-evident, it is gratifying to be able to say that, clinically, this does not occur so often as would be expected. In the majority of cases, following the correction of nasal abnormalities, the bronchial irritation ceases to be a troublesome factor. Indeed, the entire response, even of the old asthmatic case, to treatment along these lines is usually better than we would expect, in view of the complex morbid anatomic conditions involved.

With this understanding of the problem, it is not necessary to treat asthma by the customary methods of trial and error. When our diagnostic study is completed we can determine very closely the result obtainable in each case and can outline a program that will produce the results predicted.

This precision of prognosis for individual cases is possible by no other method of treatment. It has the double value of avoiding wasted effort and of preventing false hopes as to results. To the clinician, confronted by the difficult asthma problem, this value alone is one that can hardly be overestimated.

122 South Michigan Avenue.

Prenuptial Medical Certificates

In regard to a proposed French law making a prenuptial medical certificate obligatory, the effect would be to hinder the practice of marriage, as in certain parts of the United States where such laws have had to be greatly modified. Laws can never reform manners and coercion will never further real hygiene.—Dr. H. Bouquet, *in Monde méd., Paris, March 15, 1928.*

Detoxication Treatment in Asthma

By ALVIN W. LA FORGE, M.D., Chicago.

ABOUT ten years ago Dr. Burton Haseltine and I presented a series of papers on *"A New Conception and Successful Treatment of Bronchial Asthma,"* setting forth in detail the therapeutic principles and procedures we use. Of these, an isolated, but important one in our success, is a detoxicating regime used in selected cases, called the "elimination" or "detoxication" treatment. Fragmentary and very sketchy accounts of this treatment have been published but a complete and definitive presentation has never been made. Neither is this an attempt to do so. The subject is so full of details that it lends itself to textbook presentation only; hence, this article is limited to its history and development.

About twelve years ago we undertook to mobilize the various detoxicating measures sporadically used into a definite, co-ordinated, systematic and efficient elimination program. For fifteen years prior to this, Doctor Haseltine had used detoxicating measures in an imperfect way, but even these incomplete efforts had secured results, in selected cases which, though sometimes temporary, were, nevertheless, astonishing. It was his conviction that practically all asthmatics could obtain a certain measure of benefit, and many of them could secure still greater benefit if we could devise an efficient program of judiciously regulated eliminative measures.

Desirous of obtaining help from previous efforts, and of learning what had been done before, we undertook a survey of the world's asthma literature for five years immediately preceding, knowing that the references included would cover all important work done some years before. A year was consumed in obtaining and reviewing this literature, but the search was fruitless. Numerous authors mentioned that the intestinal function should be regulated; others stated that at times diuretics seemed quite valuable; still others commented favorably on diaphoresis; and several extolled starvation treatment. Each and every eliminative procedure has been commented upon and recommended by some writer, somewhere, in asthma literature, but an orderly and coordinated program which includes all of these measures, and in a manner capable of adjustment and modification to individual needs, could not be found. We were thrown on our own resources so our first task was to determine the essentials of an ideal detoxicating regime.

It was agreed that such a regime must possess the following qualifications:

1.—It must stimulate elimination, not only from one, but from all the excretory channels; viz. the lungs, skin, kidneys, and intestinal tract;

2.—It must be capable of accurate modification to suit the particular needs of each individual patient;

3.—It must be capable of administration, either in the hospital or in the home;

4.—It must not induce any unpleasant reaction nor result in undue bodily depletion;

5.—It must, not only increase elimination, but must increase general metabolism and promote general nutrition.

This last qualification is of deep significance because, at that time, a wave of dietary and starvation treatment for asthma was sweeping over the country, the cause of which was readily apparent. The use of skin tests for food sensitization had become wide-spread and asthmatics were being found sensitive to many foods. Attempts to desensitize these patients to these substances were admittedly failures. Consequently, physicians using such methods were compelled to resort to strict dietary regulations, withholding from the patient all of the foods to which he was known to be sensitive. In so doing, physicians went so far as literally to starve these patients until they became victims of mal-nutrition as vicious as the asthma itself.

Fortunately, we have never been compelled to use such methods and some of our most dramatic results have been in patients who had formerly been subjected to them. We have always recognized the fallacy of dietary and starvation treatment and for years have cautioned against their use as being both futile and dangerous: Futile, because neither starvation nor dieting removes or corrects any of the now known causes of asthma; and dangerous, because, so often, such methods withhold from asthmatic patients certain basic food requirements essential to nutrition and vital in any combat with disease.

Based on the above considerations, one of the important elements of our detoxicating regime is its all-inclusive diet, the

increase of general metabolism, and the promotion of general nutrition.

The next task was to select the agents and procedures by which our aims could be realized. A critical comparison of the value of different methods as applied to asthma resulted in the selection of hot, dry packs for diaphoresis, increased water intake for diuresis, and magnesium sulphate, blue mass, and certain vegetable extracts for catharsis. Many reasons governed our choice but they will not be discussed here as they were fully set forth in two articles on bronchial asthma which appeared in CLINICAL MEDICINE for December, 1924, and January, 1925.

Having selected the agents and procedures to be employed in the detoxication treatment, it was then necessary to have some measure or standard of elimination, for purposes of comparison. Elimination is obviously both quantitative and qualitative and any standard which could be used would be an approximation, at best. However, we summed up our standard of daily elimination as follows: "Given an adult male, weighing about 180 lbs., the daily unit of elimination should include about one hour in a hot, dry pack, the ingestion of about 12 glasses of water, and one or two fairly large, liquid or semi-solid defecations, with one or perhaps two smaller ones."

This daily unit of elimination must be modified according to the age, sex and weight of the patient, and according to each particular patient's reaction to it, day by day. For example, a woman cannot tolerate as vigorous elimination as can a man; a child does not require so much as a woman; and an older patient does not withstand so much as one who is younger and more robust. Those severely depleted by starvation diets or the natural ravages of asthma cannot tolerate catharsis so well as they do diaphoresis and diuresis; those with heart disease sometimes complain of the recumbent position required for the pack, and for these we elevate the head with several pillows. Some patients cannot take magnesium sulphate except in very small doses, and as little as one-quarter of a teaspoonful daily may be the maximum dose that can be borne. Patients with eczema may complain that the heat of the dry pack induces intolerable itching, which requires that the pack be reduced in length of time. Children cannot tolerate prolonged catharsis, and with them one is somewhat limited to diaphoresis and diuresis. With infants the whole treatment must be modified still further to meet their individual peculiarities.

It can be seen from this that, although we have evolved a daily unit of elimination, it is merely for the purpose of having a definite starting point or standard from which we vary.

At this point it is well to make it unmistakably clear that the detoxication treatment is never used alone in the treatment of asthma, but is always utilized coincidentally with other procedures. In other words, we never approach asthma from the detoxication route alone; this is only one of the many measures which may be indicated.

Furthermore, it is not indicated in all asthmatics but only in those whose clinical picture, blood and urinary findings reveal the necessity for it. In these patients it may be necessary to use it more than once if toxemia recurs. If used in a patient who does not require it, it will work harm; if overdone in a patient who does require it it will do harm; but used intelligently, in carefully selected cases, it is one of the safest and most potent forms of adjuvant treatment for asthma. For ten years we have demonstrated its usefulness and have now learned how to select cases in which it will secure results.

Physicians who use this treatment can be divided into two groups; namely, those who have been to Chicago and have seen it used; and those who have read about it and have attempted to utilize it without ever having seen it applied. The difference between these two groups is that those who have seen it used are very much more careful to modify it to the needs of each patient and to correct it whenever there is the least indication that it is either underdone or overdone. Those who attempt to use it from reading knowledge only, but have never seen its application, are usually inclined to apply it too drastically, which works extreme hardship upon the patient. The rule can be formulated that, whenever a patient undergoing the detoxication regime complains of any unpleasant reaction, modification of the treatment is imperatively called for; further, if the patient loses weight the treatment is not being carried out skillfully.

The writer has already indicated that the proper administration of this treatment is so detailed that it lends itself to text book presentation only. The details that have been enumerated above are only a few

of the many considerations which surround its successful administration.

Conclusions

1.—This paper is not an attempt to give all of the details for the successful administration of the elimination treatment, but merely enough of them to show what care must be exercised, both in selecting patients and in gauging their treatment.

2.—This treatment is never to be used alone, but always in conjunction with other indicated measures.

3.—When administered by those who have never actually seen it applied skillfully it is generally administered too vigorously.

4.—When fragmentary accounts of this treatment were first published it was adopted and widely recommended by several investigators whose recommendation was not tempered by any contraindications; consequently, the result is that it has been employed where it was contraindicated and has been overdone by many who were unacquainted with the refinements of its application.

5.—This treatment is not indicated in all asthmatic patients, but properly used, in carefully selected cases, it is one of the most potent forms of adjuvant treatment, and has demonstrated its usefulness during ten years of application.

Pittsfield Bldg.

The Science of Nutrition and its Applications to Clinical Medicine.

By VICTOR E. LEVINE, Ph.D., Omaha, Nebr.
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A DISTINGUISHED physician, who made a reputation for himself in the diagnosis and treatment of tuberculosis, once took a visitor through his sanitarium. Turning to the kitchen the doctor exclaimed with great pride: "This, sir, is my pharmacy." This pithy utterance reveals our present conception of the therapeutic value of diet, and emphasizes the importance of the dietetic department in the modern hospital.

In the last twenty-five years, progress in treatment has followed diverging paths. One path has led to the use of substances extremely toxic and foreign to the human body. Examples of such substances are numerous. Among them may be mentioned alkaloids, coal-tar products, organic dyes, gold, radium, mercury, arsenic, bismuth, and colloidal lead. Much was formerly expected of chemotherapy. Each new drug, such as salvarsan or mercurochrome, has been heralded as a marvel in the direction of cure. As time goes on, however, the enthusiasm of the early moments loses some of its exaggerations, the qualities of the new drug become understood and it takes its due place among the list of remedial agents at the command of the clinician.

Side by side with the artificial era in therapy we have with us the natural era, which follows the path leading to a sincere and honest attempt to imitate the natural ways in which the biologic organism functions. The trend towards natural proceedings for maintaining health, curing, or preventing disease has brought about wider use of and greater respect for the recuperative value of rest, for mechanotherapy, for heat and light therapy, for immunotherapy and hydrotherapy, and for dietotherapy.

We are living today in an age replete with wonders. Formerly it took a science several centuries in the making; today a whole science takes firm root, blooms, and bears fruit in but little more than a dozen years. In 1910 very little was known about food except calories and a few things about proteins. In that year all the accepted knowledge pertaining to food could be conveniently covered in two or three lectures. The various medical and scientific journals rarely carried an article pertaining to nutrition. Today the science has grown so big, the literature has become so voluminous, and the discoveries so numerous, that even a deep student of the subject has a difficult time in keeping up.

Some one has said that the greatest glory of science lies in its usefulness to mankind. This truth finds ample expression in the field of experimental nutrition. In no other field of scientific endeavor is the newer knowledge so immediately applicable and so permanently beneficial to the human race.

Let us briefly review the advances in the science of nutrition and its application to

medicine. In the first place we have at present a clearer and more definite idea of what constitutes an adequate or well balanced diet. When the physician or surgeon makes a demand upon the dietitian for a building-up diet, he is certain that his patient will get it. We used to praise calories to the seventh heaven. Now we realize that a little knowledge is very dangerous. Besides the calorie-producing foods we need those possessing no energy value, but nevertheless indispensable for the proper maintenance of the biologic organism.

A well balanced diet, adequate quantitatively and qualitatively, must have the following nutritional factors:

Essentials of a Well-Balanced Diet

1.—Protein, in sufficient quantity to furnish, for the adult, two-thirds of a gram per kilo of body weight, and for the child one gram per kilo of body weight; and of superior quality with reference to the presence of such indispensable amino acids as cystine, tryptophane, lysine, etc.

2.—Carbohydrate, of the digestible type, to furnish energy to help in the burning of fat and to spare protein; and of the indigestible type, such as cellulose and agar, to furnish residue for proper peristalsis in the intestinal tract.

3.—Fat, of a quantity in relation to carbohydrate to insure a ratio of not more than 4 to 1; and of superior type, that is vitamine-bearing fats, such as the fat in egg yolk or the fat in milk, butter and cream.

4.—Oxygen, supplied by the respiratory tract, of sufficient quantity to oxidize the protein, fat and carbohydrate ingested.

5.—Water, of sufficient quantity to allow for lubrication of opposing surfaces (oral cavity, joints, pleura, pericardium, amniotic fluid); to allow for the production of secretions and excretions, such as digestive fluids, milk, spinal fluid, urine, perspiration; to allow for the production of a fluid like blood; to allow for the processes of digestion, assimilation, and oxidation; to allow for the regulation of heat by the removal of water through the kidneys, lungs, and skin; and to allow for the regulation of osmotic pressure through the proper concentration of salts in the blood and tissues.

6.—Inorganic or mineral compounds, to build and repair tissue; to assist in maintaining the normal relations with reference to osmotic pressure; to maintain the normal contractility of the muscular system and the normal irritability of the nervous system; to assist in maintaining the hydrogen ions of the body in concentrations compatible with life; to furnish the acids and alkalis of the digestive secretions; to aid in holding insoluble substances, like uric acid, in solution in the body fluids; to aid in such special processes as coagulation, which requires calcium ions, the building of hemoglobin which requires iron, and the production of such hormones as thyroxin, which requires iodine.

We know at present enough about the nutritional requirements of the more important inorganic elements to indicate the daily quantity to be ingested. The daily calcium intake should be 750 milligrams for adults and 1,000 milligrams for growing children and for pregnant and lactating women. The phosphorus intake should be 1,320 milligrams for the adult and 1,500 milligrams for children and for women during the period of pregnancy as well as during the period of lactation. The daily iron has been placed at 15 milligrams. In conditions of anemia and during pregnancy the iron intake should be increased to 20 or 25 milligrams. One milligram or 1/65 grain of iodine is sufficient for the daily intake. This minute amount can never bring an individual into the danger of over-iodization.

7.—The "A-P" or anemia-preventing factor, discovered by Whipple and Robscheit-Robbins, an iron-free substance found in certain foods, capable of regenerating hemoglobin and red blood cells, and therefore efficient in the treatment and prevention of the mild forms of anemia and of the severe forms, such as pernicious anemia. Foods known at present to be abundant in "A-P" factor are liver, kidney, whole egg, egg yolk, spinach, cabbage, lettuce, prunes and apricots.

8.—Vitamines, of which there are two types. One type consists of water-soluble vitamines—the anti-beriberi vitamine, the anti-scurvy vitamine, and the anti-pellagra vitamine. The other type is made up of fat-soluble vitamines—the anti-ophthalmia vitamine, the anti-rickets vitamine, and the anti-sterility vitamine.

9.—Sunlight, which nutritionists consider as part of the adequate diet. Without it the human being does not maintain himself in good health, the gastric acidity is low, appetite is diminished, food is not assimilated, and there is a strong tendency to anemia, infantile tetany, osteomalacia, and tuberculosis.

Deficiency Diseases

In 1912 we knew definitely of one deficiency disease, and that was beriberi. It was research in connection with beriberi that led to the discovery of the first vitamine. Today we fully recognize many more deficiency diseases; scurvy (vitamine C deficiency), xerophthalmia (vitamine A deficiency), pellagra (deficiency in anti-pellagra vitamine), dehydration fever (water-deficiency), ketosis (carbohydrate deficiency), simple or endemic goiter (iodine deficiency), chlorosis (iron deficiency), war, famine or hunger edema (deficiency in superior protein). Our newest member elected to the group of deficiency diseases is pernicious anemia. The work of Whipple and his associates and of Minot and Murphy, is very suggestive of the nutritional deficiency that is the etiologic factor in this condition. Sprue, which is very much like pernicious anemia, has been long ago recognized as a deficiency disease, and its treatment through diet has been regarded as the only therapeutic procedure of any worth. In addition, we must not fail to mention that trachoma is beginning to be considered a deficiency disease,* and that there is no doubt in the mind of the writer that muscular dystrophy and various types of purpura will soon be included in the deficiency diseases.

It must be said that, with the exception of pellagra in the southern states and sprue in the West Indies, there are comparatively few cases of well developed deficiency diseases in America. But for every such case there are hundreds of thousands of cases of incipient and hardly recognized types and degrees of malnutrition, all benefited by a more inclusive diet.

The clinician, with the aid of the expert dietitian, can do more than prevent or cure deficiency disease. If that were the only contribution of the science of nutrition, the dietetic laboratory and the diet kitchen would still deserve a place in every modern, well-regulated hospital. Malnutrition is the most common biologic error among the young and adult. The result of malnutrition is loss of physical vigor, decrease in the power of resistance against invasion by the lower forms of life parasitic to the human being, and consequently an increased tendency to infection. Diet is therefore a very important therapeutic measure in preoperative treatment, during acute and chronic infection, and during the period of convalescence.

Special Diets

So far we have mentioned the relation of diet to the specific nutritional diseases—the so-called deficiency diseases—and those pathologic conditions in which building up the patient is of great benefit. We shall now point out that diet plays an important part in the diseases characterized by some failure in the functioning processes.

The aim of the dietary treatment is to take the load off the damaged organ. In diabetes, the pancreatic islands of Langerhans do not produce enough insulin, a hormone necessary in the complete burning of sugar. We regulate the carbohydrate intake so that no extra load is put upon this damaged organ. In some forms of nephritis a low protein and low chloride diet is given in order to allow the damaged kidney to handle no more than its limited functions would allow. In obstructive jaundice, bile is not delivered into the intestines, fat is very poorly digested, and we accordingly restrict the fat intake so as not to allow the intestinal tract to be clogged up with undigested fat, which would stand in the way of the digestion and absorption of other nutrients. Diseases of the heart, liver, and the gastro-intestinal tract also call for dietetic intervention. Underweight, anemia, obesity, and chronic constipation are also amenable to dietary treatment.

Before closing it would not be out of place to mention some famous diets that have been developed in the attempt to arrive at proper dietetic treatment. Among them may be mentioned the Sippy, Smithies, Alvarez, and the Coleman diet for gastric and duodenal ulcer; the Coleman diet for typhoid and other infectious fevers; the Marsh and Newburgh diet for diabetes; the Peterman diet for essential or idiopathic epilepsy; and the Minot and Murphy diet for pernicious anemia.

The influence of the nutritionist is growing. His work has also found its way into practical medicine through channels other than the diet kitchen. This is exemplified in the widespread use in treatment of glucose solutions, and of isotonic and hypertonic salt solutions.

Nutrition has been a great aid in rationalizing treatment. Thus we no longer combat the acidosis of diabetes with sodium

*Castellani's alleged discovery of a specific organism, as well as the generally accepted communicability of the disease speak against this hypothesis.—Ed.

bicarbonate but with insulin and glucose. We treat most effectively with glucose symptoms of hypoglycemia occurring in insulin poisoning or in the toxemias of pregnancy or in post-operative conditions. We combat gastric hypoacidity with the food acids to be found in lemons, oranges and grapefruit. We treat epistaxis or hematuria, occurring in the course of scurvy, not with substances capable of hastening blood coagulation or constricting blood vessels or with clamps or packing, but with the anti-scurvy vitamine. We treat tuberculous lesions of the skin, not with ointments, but by recommending an adequate intake of calcium, phosphorus, vitamine D and sufficient exposure to sunlight in the summer and to ultraviolet rays in winter.

The dietitian in the hospital is also growing in importance year by year. This growth is but natural, for it indicates a wholesome attempt on the part of the clinician to keep pace with the rapidly developing field of nutritional therapy.

Types of Physical Constitution in Mental Diseases

The Schizophrenias

By T. J. PERKINS, M.D., Jackson, La.
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MUCH interest is being manifested in the relation between physical constitution and disease states of various kinds, and it is not strange that studies along these lines have been pursued in the field of psychiatry.

In general, it is found that persons of the plethoric, corpulent type tend to develop the acute varieties of mental disease, such as manic-depressive psychosis; while the slenderer types suffer from the more chronic varieties—the schizophrenias, or dementia precox. This article deals with studies in the latter class of cases.

In demonstrating the physical constitutional deviations in the affective reaction group of psychoses—the schizophrenias, (dementia precox)—stress is laid on the selection of types of physical habitus, and the establishment of a numerical index for the individual and a range of indices in groups of individuals, by certain measurements of trunk cavities. The normal standards applied have been derived from the work of Kretchmer in his "Physique and Character," and Wertheimer and Hesketh in their "Significance of Physical Constitution in Mental Disease".

The material used in this investigation was selected from the wards of the East Louisiana State Hospital and was composed of forty white and twenty-seven colored males, with ages ranging from twenty-two to forty years. Markedly deteriorated individuals, or those showing postural changes secondary to their mental disorder and not essentially a part of their primary physical constitutional make-up, were avoided, as were those whose physical habitus had been distorted by previous physical disease or surgical procedure.

To determine whether racial influences were a factor in the physical constitutional types found or the indices to be determined, the two racial groups were considered separately, in the main, giving due consideration to previous environmental influences, occupational effects and racial distinctions.

The avenues of approach used do not differ essentially from those of other morphologic investigators and are as follows:

a.—Description of types after careful general inspection.

b.—Absolute measurements.

c.—Photographic studies.

For inspection, the two respective groups were placed in line; types were selected and grouped. A description was then written on each individual by adhering to the following outline:

1.—Deformities, due to disease or trauma.

2.—Right-handed.

b. Occupation.

3.—Head formation: Anteroposterior and lateral.

4.—Face formation.

5.—Individual features:

a.—Nose: A. P. and lateral.

b.—Ears: A. P. and lateral.

c.—Eyes: color and placing.

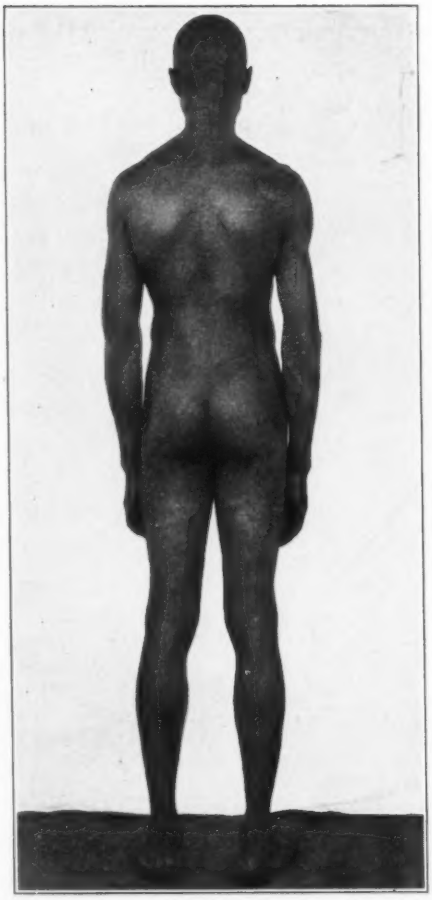
d.—Hair: color, type, line, A. and P.

e.—Baldness.

6.—Neck: larynx, thyroid.

7.—Trunk outline. Posterior relation of thorax to abdomen; A. and P., Lateral.

8.—Fat distribution.



Asthenic.

Asthenic Athletic.

9.—Hair distribution on body.
10.—Musculature (occupational effects).
11.—Skin (color, texture and moisture).
12.—Moles, freckles, nevi.
13.—Wrists and ankles.
14.—Feet: arches and toes.
15.—Hands and fingers.
16.—Nails, lunuli and curvature.
17.—Genitalia (penis and testis on palpation).
18.—Classification: general skeletal type.

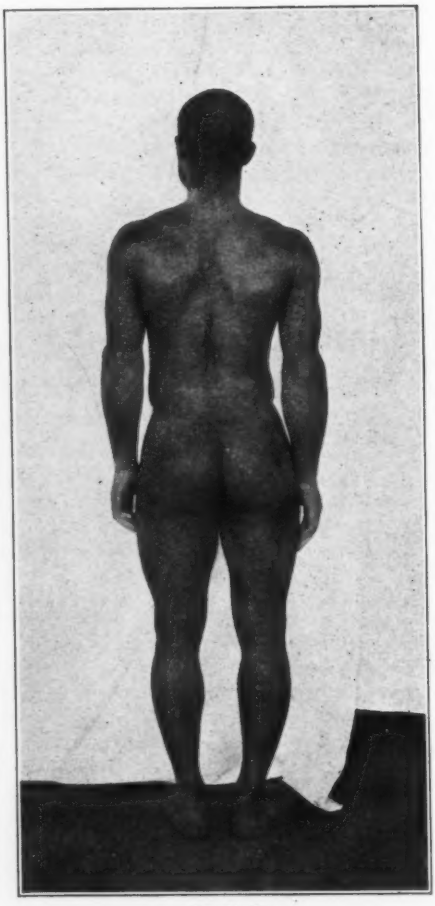
The facial outlines listed were the five-pointed, shield-shaped, short egg and long egg, as shown in Kretchmer's schematic frontal face outline. Wertheimer's and Hesketh's schematic representation of trunk profile and head formation was adopted.

In classifying the two previously determined schizophrenic observation groups, two of Kretchmer's types of habitus were found: the *asthenic* and *athletic*. There was also found a sub-type, which formed a bridge between the typically asthenic and typically athletic, with sensitive and slightly overlapping lines of differentiation on either side: the *asthenic-athletic*. There was found, also, a type of morphologic deviates who fail to conform, probably through endocrine imbalance, to either the asthenic or athletic: the *dysplastic*.

For convenience of formulation and subsequent description, the following types and sub-types found in this investigation are considered: Asthenic, Asthenic-Athletic, Athletic, and Dysplastic.

"A deficiency in thickness with an average unlessened length" is the description of the asthenic type, as summed up by Kretchmer. The deficiency in thickness is seen in every detail of the skeletal develop-

Athletic.



Dysplastic.

ment, as well as in the slender musculature. The well-defined bony prominences, the small head, short, egg-shaped face, the long slender neck with trachea apparent, body diminished in all diameters, with limbs and extremities long and thin, a scant distribution of body hair, and a soft, moist, thin skin complete the picture.

The athletic tapers from the broad, well-shaped shoulders to the ankles; the face is shield or long egg-shaped; the head is well set on a strong, muscular neck; the breast is well formed; the length of limbs is well proportioned and gives the impression of strength and agility; the hands and feet are broad and comparatively short; the muscles are well developed and stand out in plastic relief, yet are gracefully arranged on a strong-boned skeleton; the skin is thick; the hair is abundant and well distributed over the scalp and body.

The asthenic-athletic habitus is composed of elements that contribute to the formation of the asthenic and the athletic. There may be, in the transition from one type to the other, the skeletal type of the asthenic with muscular development and blanketing of fat that draws a line of demarkation between the type and sub-type; or on the other hand, the skeletal development may be that of the athletic, with a lack of musculature or an uneven distribution of same on the various parts of the body. This group does not lend itself to descriptive terminology and must be determined by the eye, accustomed to evaluating differences and variations in body conformation.

The dysplastics have long bodies and short limbs, or short bodies and long limbs. They display a lack of harmonious proportions, with usually a liberal distribution of fat and disproportionate length of musculature either on limbs or trunk. The picture is discordant and these individuals readily fall into a group by themselves.

The average status in the subjects of this study represents the status of the average Louisiana citizen. The percentage of urban and rural environment is practically equal. They are Americans of English, German, French, Scotch, Irish, Spanish, Italian and African descent, coming from the hill-lands and alluvial valleys of the State alike; and their former training and occupations include the various vocations lying between the attorney's office and the newsboy, in the urban division, and the plantation owner and day laborer, in the rural division.

The following outline of measurements was followed in the second section of the investigation:

1.—Weight (kilograms).
2.—Span.
3.—Stature.
4.—Xyphoid Height.
5.—Symphysis Height.
6.—Sitting Height.
7.—Horizontal Chest Circumference.
8.—Chest Length.
9.—Biacromial Diameter.
10.—Transverse Chest Diameter.
11.—Sagittal Chest Diameter.
12.—Ilium Height.
13.—Ilium Width.

After tabulating measurements obtained of each individual, the method of Wertheimer and Hesketh has been followed in establishing indices, as it seems to be the only method thus far used that establishes trunk volume without reference to the weight factor. To quote the above authors, ("Medicine Monographs," Vol. X, Page 40-41); "The skeletal part of the thorax and the trunk height were used as the skeletal substratum of the three-dimensional volume of trunk. The trunk volume was therefore expressed as the product of three measurements:

1.—Transverse chest diameter.
2.—Sagittal chest diameter.
3.—Trunk height.

"In order to obtain the relation to limb length, the product of these three measurements was combined with the length of leg. The formula of the index is therefore:

$$\text{INDEX} = \frac{\text{Leg Length} \times 10^3}{\text{Transverse chest diameter} \times \text{sagittal chest diameter} \times \text{trunk length.}}$$

All measurements are expressed in centimeters. The leg length is multiplied by 10^3 to bring it to the cubic dimension and in this way relate it mathematically to the cubic denominator, composed of the product of three linear measurements. The quotient is multiplied by 100, in order that the result of index may be expressed without decimals".

Correlating the data obtained from inspection and measurements, after their completion, gives the following :

Table No. 1
Showing Combined Results of Inspection and Measurements
WHITE

Name	No.	Age	Type	Diagnosis—Sub-Type,	Index
J. B.	11856	28	Asthenic	Schizophrenia, Catatonic	338
C. L.	9677	29	Athletic	Schizophrenia, Simple	274
T. F. M.	12428	27	Asthenic-Athletic	Schizophrenia, Hebephrenic	287

From this is obtained the average index and the ranges of indices, in each racial group, from low to high, which is shown in Tables 2 and 3.

Table No. 2
Showing Average Index and Range of Variation in Index Curve
40 WHITE MALES

		Index	Range of Variation
ASTHENIC	(20)	325	299—357
ASTHENIC-ATHLETIC	(6)	287	278—295
ATHLETIC	(9)	266	250—287
DYSPLASTIC	(5)		216—370

Table No. 3
Showing Average Index and Range of Variation in Index Curve
27 COLORED MALES

		Average Index	Range of Variation
ASTHENIC	(13)	327	306—362
ASTHENIC-ATHLETIC	(5)	298	293—305
ATHLETIC	(5)	270	256—286
DYSPLASTIC	(4)	301	277—386

Analysis of these tables shows that the average index of the white male asthenic is 325, with a curve of variation from 299 to 357; the asthenic-athletics average 287, with a variation from 278 to 295; the athletics average 266, with variations from 250 to 287.

In the colored group, the average asthenic is 327, with variations extending from 306 to 362; the asthenic-athletics average 298, varying from 293 to 305, while the athletics average 270, and vary from 256 to 286.

It will be observed that the average index in all types of colored males considered in this series is higher than that of the whites. This may be explained by the fact that the average index of the white males was obtained from a group composed of various nationalities that normally present varia-

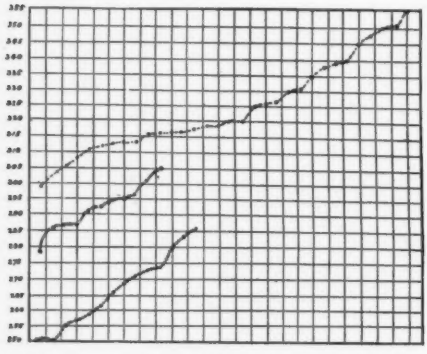


Table No. 4.—Showing Distribution Curve of Three Types. Lower curve, athletic; middle, asthenic-athletic; upper, asthenic.

tions in stature. The normal frequency curve shown in Table 4, made up of the two racial groups combined, shows the overlapping of the asthenic-athletic on either side and brings out the necessity of the two methods of procedure in differentiating between types and sub-types.

Table No. 5

Showing the Average and Range of Measurements Used in Deriving Index

WHITE

	Xyphoid Ht.	Sympysis Ht.	Trunk Ht.	Transverse Chest	Sagittal Chest
ASTHENIC					
AVERAGE	141	86	54.9	26.1	18.3
HIGH	149	92	59	28.5	20.5
LOW	131.5	79.5	51	22	16
ASTHENIC-ATHLETIC					
AVERAGE	142.5	87.1	55.6	27.8	19.4
HIGH	150	93	57	30	21
LOW	136	80	54	25	18
ATHLETIC					
AVERAGE	143.9	86.5	57.5	27.2	20.5
HIGH	148.5	91.5	59.5	28.5	22
LOW	136	79.5	54.4	26	19
DYSPLASTIC					
HIGH	143½	85	62	28	23½
LOW	129½	67½	54	25	17

Table 5 shows the various measurements used in arriving at the indices, namely: xyphoid height, symphysis height, trunk height, transverse and sagittal chest diameters. A study of this table will indicate the transition from the asthenic to the asthenic-athletic and from the asthenic-athletics to the athletic types.

It will be seen, from the measurements of the asthenic, that they are lacking in all dimensional measurements. A further study of this chart will show that, particularly in the sagittal chest diameter, the asthenics fall below the asthenic-athletics, and the asthenic-athletics fall below the athletics.

It will also be seen that the asthenic-athletics have a diminution in the trunk height with an increase in the symphysis height, when compared to the athletic type. The percentage of types found in the sixty-seven patients inspected was as follows:

Asthenic .....33 or 49.2 plus percent
Asthenic-Athletic ....11 or 16.5 plus percent
Athletic .....14 or 20.8 plus percent
Dysplastic ..... 9 or 13.4 plus percent

Table 6, after Wertheimer and Hesketh, shows the ranges of values of indices which were derived by measurements, independently of inspection. It will be seen that the

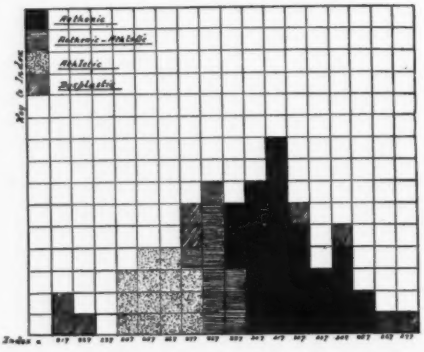


Table No. 6.—Showing Distribution and Overlapping of Types and Sub-types—67 Schizophrenics.

asthenics give the highest index, overlapping into the sub-type, asthenic-athletic, and forming a peak in the range of greatest average, between 317 and 327. The asthenic-athletics show an overlapping on either side in proportion, in this particular group of individuals, from one on the athletic to three on the asthenic side.

The athletics show a range of indices from 250 to 286, with a fairly even distribution between those points.

The dysplastics are shown merely to demonstrate that their discordant physical conformation gives an indeterminate index, ranging at indefinite points from the highest to the lowest point of index curve.

The pictures shown herewith are those of individuals that have previously been described. It will be noted that the type in each case, as determined by observation and inspection, coincides with that obtained by measurements.

In conclusion, it may be said that, in so far as this study has progressed, it tends to confirm the work of Wertheimer and Hesketh, as well as that of Kretchmer. Definite opinions would not be justified until after further investigation, but the results in this group of sixty-seven cases would indicate that the asthenic and athletic habitus are most common in the schizophrenic, and that the index, established by the foregoing method, may prove very valuable in differentiating between manic depressive and the schizophrenic psychoses, in patients showing a coloring of each.

Studies In Photochemistry*

(I. The Halphen Reaction)

By A. J. PACINI and R. W. CROSLEY, Biophysicists, Chicago

AN ENTIRELY new approach to the understanding of the pharmacologic action of radiation on the human body is offered through the study and development of photochemistry. Probably one of the most discussed examples of photochemical action is the one in which ergosterol, exposed to suitable untraviolet radiation, acquires antirachitic properties. It is said that ergosterol occurs to some extent in the human skin, probably in association with sebaceous secretion. When the human body is exposed to ultraviolet radiation, the ergosterol acquires antirachitic activity in sufficient amount to permit of its action in the prevention and cure of rickets.

There is a tendency to regard all radiant energy as light, and to abandon the restriction of the word light which physiologists imposed on that section of the electro-magnetic spectrum sensed by the human eye (from red to violet).

To physicists, the word photochemistry is assuming new proportions. It is no longer restricted to the actions produced by visible light alone; it has already extended to include reactions occasioned also by invisible ultraviolet radiation, and it seems certain that photochemical reactions can proceed in the invisible infrared region of the spectrum.

Until now, reactions were designated photochemical when they were accompanied by a minimum of heat generation; and they were called thermal when they were accompanied by considerable heat formation. Thus, in a general way, visible light and ultraviolet reactions fell in the domain of photochemistry; but reactions in which heat was involved were considered as thermochemistry. Now, it is possible to choose examples in which ultraviolet radiation initiates chemical reactions where much heat is manifest; and contrariwise, it is possible to initiate chemical reactions with infrared radiations where the temperature remains considerably lower than that which accompanies ultraviolet reactions. With such examples as these, it becomes increasingly more difficult to use the formation of heat as a distinguishing criterion between photochemical and thermochemical activities.

Although much has been written on photochemistry, and comparatively little has appeared on the similarity that exists between certain photochemical and certain thermochemical reactions, explanatory theories can be formulated only after considerably more experimental evidence is furnished; and in keeping with this theme, we desire to report a series of studies, from the facts of which it will be possible, later, to formulate a working hypothesis.

This first contribution, therefore, is one of a number of reactions which we have studied in a large series in which infrared radiation has been found to provoke the same end results as are occasioned by ultraviolet radiation. Ultimate explanations must be suspended until all of the evidence is presented and carefully evaluated.

The Halphen Reaction on Cottonseed Oil

When cottonseed oil is mixed with a reagent consisting of equal parts of amyl alcohol and carbon disulphide, containing ¾ of 1 percent of dissolved sulphur, and the mixture, in a test tube, is heated in a brine bath, a red color is produced. This is the Halphen reaction. It is said to be

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produced also by kapok oil[1], baobab oil, calumpang seed oil, and oil of okra seed[2].

Nothing much seems to be known regarding the cause of the reaction. It is thought to be due to an aldehyd group, or to an unsaturated fatty acid.

Conflicting statements appear on the effect of heat in its ability to alter the Halphen reaction. Soltsien[3] records that heating cottonseed oil to 200°C. for 10 minutes prior to making the Halphen test results in an appreciable weakening of the reaction, and adds that the oil darkens in color and becomes weakly fluorescent. Heated to 250°, the same investigator states that the oil becomes brownish yellow, and that it develops a strong fluorescence and acquires an acrid taste which makes it unfit for food; at the same time, the Halphen reaction is no longer obtainable.

Holde and Pelgry[4] state that heating to 220°C. does not destroy the reaction. Fulmer[5] observed that, if the oil be maintained at a temperature of 180°C. for 10 minutes, the reaction is perceptibly weakened; that higher temperatures weaken the reaction still more; and that at 280°C. the reaction is completely unobtainable. Fulmer goes on to say that there is no change in the appearance of the oil, excepting for a slight darkening.

Raikow and Tscherweniwanow[6] found that a temperature of 150° for one hour was without appreciable effect on the reaction, but after five hours the reaction was reduced to one-half, and after ten hours to one-third of its intensity.

Raikow[7] also made some observations on the effect of light on the Halphen reaction. He exposed pure oil in a glass tube to south light for seven winter months and observed that the reactivity of the oil was not destroyed; but if the oil was mixed with sulphur, or with carbon disulphide, and then exposed to the light in a similar fashion, the ability to strike the Halphen reaction was lost. He states that oil mixed with the Halphen reagent would develop a characteristic color merely by exposure to light, and that a number of exposures to light finally dispelled the reaction which light first produced. The reaction produced by light did not manifest the intensity of that produced by heating. According to Raikow, also, the reaction produced by heating can be made to disappear by further exposures to light; but it does not disappear upon further exposure to heat.

Method

Since the time of the original work of the various investigators mentioned above, tremendous strides have been made in a better understanding of radiation. We have repeated some of the experiments under more standard conditions of radiation supply, our object being to study the effect that ultraviolet and infrared radiations might produce on the Halphen reaction of cottonseed oil.*

The infrared generator, as measured by a Leeds and Northrup optical pyrometer, operated at a temperature near 800°C., so that its maximum energy was peaked in the region of wave-length of 2.7 microns. The ultraviolet generator was a standard model, mercury arc in quartz, operating at 75 volts.

Experiment 1: A layer of cottonseed oil about ⅜ inch deep was placed in a glass crystallizing dish 19 cm. in diameter and exposed, under a Z-30 Zoalite, for eleven hours. For the first three hours the dish of oil was placed 18 inches below the edge of the lamp casing; for the next seven hours the distance was decreased to 10 inches; and during the last hour to seven inches. The temperature of the oil was not measured, but until the last hour it was not hot enough to be unbearable to a finger dipped into it. At half-hour intervals, samples of 1 cc. were removed, mixed in a test tube with 1 cc. of Halphen's reagent, and heated on the brine bath for one hour, at least. This treatment reduced the intensity of the Halphen reaction to one-half.

Experiment 2: A layer of cottonseed oil about ¼ inch deep was placed in a pie tin of 25 cm. internal diameter and radiated, under a Z-30 Zoalite, continuously, for thirteen hours, at a distance of eight inches from the edge of the lamp casing. At intervals the temperature was measured with a mercury thermometer. The maximum temperature registered was 130°C. The temperature registered was higher when the thermometer was allowed to lie quietly with its bulb partly immersed in the oil, than when the oil was stirred with the thermometer, or when the dish was tipped and the bulb of the thermometer completely immersed in the oil that collected on the lower side of the dish.

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*We are indebted to the Burdick Corporation, Milton, Wisconsin, for specially designed infrared radiators, Zoalite infrared radiators and for ultraviolet sources.

The following table gives the temperatures recorded at various intervals during the exposure of the oil.

Approximate time of exposure	Temperature with thermometer bulb partly immersed in the oil, and at rest	Temperature with dish tipped, bulb completely immersed, and oil stirred
2½ hours	118	116
2¾ hours	117	115
3 hours	117	.....
3¾ hours	121	115
6 hours	128	124
8 hours	125	117
10 hours	130	115
12 hours	125	115

At half-hour intervals samples were transferred to test tubes and subjected to the Halphen test, as in the preceding experiment. In the thirteen-hour period of this experiment, the color produced in the Halphen reaction was reduced from a deep red to a pale orange yellow, but did not completely disappear.

Experiment 3: In this experiment a special reflector was used, which enabled us to obtain a much greater intensity of radiation than we could obtain with the Z-30 Zoalite. A layer of oil about ¼ inch deep was placed in a pie tin and exposed continuously for a period of four hours, at a distance of 11 inches from the axis of the burner elements. At half-hour intervals samples were removed and tested as before. At these times, temperature readings were also taken. The observations are recorded in the following table.

Approximate time of exposure	Temperature; thermometer bulb partly immersed and at rest	Temperature; oil stirred with thermometer	Intensity of reaction
0.	.....	.....	deep red
½ hour	170	165	reduced
1 hour	175	168	further reduced
1½ hours	172	168	further reduced
2½ hours	177	173	further reduced
3 hours	175	173	only faint orange left
3½ hours	185	175	reaction completely gone
4 hours	165	157	reaction completely gone

The viscosity of the oil was increased during the exposure. An approximate measure of the increase was obtained by filling a 1 cc. pipette with the oil, allowing it to empty from the 1 cc. mark to the bottom of the bulb, counting the number of drops which fell, and recording the time.

Sample	Number of drops that fell	Time in seconds
Untreated oil	32	35
Oil exposed for four hours	36	93

Experiment 4: A sample of cottonseed oil was placed in a porcelain evaporating dish and exposed to the radiation of the quartz-mercury arc at a distance of ten inches for a period of 9¾ hours. Samples of 1 cc. were removed at intervals and subjected to the Halphen test as above. In the course of this experiment the color produced in the Halphen reaction was much reduced. Comparison with the colored samples from another experiment shows the reduction to have been about one-half.

Experiment 5: Two 25-gram samples of cottonseed oil were placed in two crystallizing dishes 7 by 3.5 cm. One was covered with a sheet of glass (cleaned photographic plate) and the other was left uncovered. They were placed together under the quartz-mercury arc at a distance of nine inches, and were exposed continuously for 15 hours. The radiation was then discontinued for 7 hours; begun again and continued for 2 hours; stopped for 2½; and begun again and continued for 4 hours; making a total of 21 hours' exposure. In the case of both the covered and the uncovered oil, the yellow color of the oil was bleached considerably. At hourly intervals samples were removed and subjected to the Halphen test. There was a decrease in the intensity of the color of the Halphen reaction, which progressed regularly with increasing exposure. The oil which was exposed without a glass cover lost practically all of its reactivity, the last Halphen test showing only a faint yellow tint, no darker than the original color of the untreated oil. The oil which had been covered with glass lost its reactivity to a much less degree—about one-fourth as much. Members of the two series of test samples were matched as closely as possible as shown in the following table.

Exposed without glass cover			Exposed with glass cover	
Sample	Time radiated		Sample	Time radiated
2	1 hour	matched	5	4 hours
3	2 hours	"	8	7 "
4	3 "	"	12	11 "
5	4 "	"	16	15 "
6	5 "	"	20	19 *hours

*Actually 19¼ hours, due to irregularity in taking sample.

The viscosity of the oil was increased during the radiation. An approximate measure of the increase was made by filling a 1 cc. pipette with the oil, allowing it to empty from the 1 cc. mark to the bottom of the bulb, counting the drops that fell, and recording the time. The following table gives the finding.

Sample	Number of drops that fell	Time in seconds
Untreated oil	36	40
Oil exposed 21 hours under glass	38	68
Oil exposed 21 hours without glass	43	240

Results

It was established as a gross fact that cottonseed oil exposed to infrared radiation

loses its ability to strike the Halphen reaction. This phenomenon appears to be related to the intensity of the infrared radiation and to the time of exposure. Inadequate intensities are less effective than stronger intensities.

Cottonseed oil exposed to radiation of the mercury arc in quartz also loses its ability to give the Halphen reaction.

Cottonseed oil exposed to ultraviolet radiation filtered through glass is much less affected.

Conclusion

There is a resemblance in the action of infrared radiation and ultraviolet radiation in the effect that both exert on cottonseed oil, in their ability to diminish or extinguish the property of cottonseed oil to give a positive Halphen reaction.

Further studies of a quantitative nature are in progress and will be reported shortly, as will other reactions.

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9 S. Clinton St.

Clinical Suggestions

By FRANK MACKIE JOHNSON, M.D., Freeport, N. Y.

YEARS of experience in the practice of medicine may not make a man a laboratory expert or a bold and fearless surgeon, but it seems to me that they should qualify him to make some practical, if homely, suggestions regarding the treatment of sick people. This I shall attempt to do, with no idea of connected order or sequence—simply clinical suggestions.

A Life-Saver

Strychnine and nitroglycerin, given hypodermically in *large doses*, in warm saline solution, and repeated as indicated, will often prevent death in cases of extremely severe illness.

A woman of 28 years suffered with pneumonia and capillary bronchitis. When I saw her she was comatose and death seemed imminent. She was given three injections of strychnine and nitroglycerin (1/10 grain strychnine and 3/100 grain nitroglycerin) and her life was saved.

No case, no matter how hopeless, should be given up utterly until this procedure has been tried.

Hypodermic Injections and a Substitute

A hypodermic or intramuscular injection seems so common and homely a performance that little attention is given, in medical schools, to teaching the technic. The matter is, however, important.

The site of the injection should be sponged with alcohol or painted with a reliable antiseptic. The skin should be tense. The needle—always a *sharp* one—should be inserted and removed *quickly;* but the injection should be made *slowly.*

A good way to learn how to make an intramuscular injection expertly is to practice on a firm orange, using an old needle and a syringeful of water. When one can stab the orange and make the injection with precision and confidence, one can do the same thing in the human buttock, thigh, deltoid, or other fleshy part of the anatomy.

If the patient fears the prick of the needle, rub the site of injection with a piece of ice for a moment or two, and then insert the needle with a quick stab, which will be entirely painless. This may seem a small matter, but attention to "little things" in the sick-room brings a rich reward.

If the patient is pathologically hypersensitive, or where, for any other reason, an injection would be troublesome or undesirable, place one or two hypodermic tablets of the indicated medicament directly under the tip of the tongue and ask the patient to close his mouth tightly. The saliva dissolves the tablets at once, and the absorptive power of the mucous membrane at this point is great, so that results are extremely prompt—second only to the effect of a hypodermic injection.

Heat and Cold to the Spine

Chapman's idea of producing anemia or hyperemia of the spinal nerve centers, by applying ice or hot water to the spine, had merit; but he overdid it and claimed too much, so his work is largely forgotten. The

Chapman spinal ice bag, in connection with other indicated remedies, will, however, give relief in many cases of apoplexy, congestive headache, dysmenorrhea and kindred conditions. The bag can be worn under the clothing.

One may have to combat strong superstitions in applying ice to the spine during menstruation, but one trial will prove convincing, and release from hot foot baths, morphine injections, etc., will be appreciated. Within a few moments the circulation seems to become regulated, so that the bag is no longer needed. This is worth trying in stubborn cases.

Sounds, Catheters and Cystoscopes

In passing urethral instruments of all sorts, two things should always be remembered: be patient and proceed slowly and gently; and use plenty of lubricant—"K.Y." jelly is good—on the instruments. It is also helpful to fill the urethra with sterile castor oil or similar substance before inserting the instrument.

Never use force. Never cause bleeding. If a sound cannot be passed *easily*, try a smaller one; you can work up the larger one later.

Remove the sounds gently and slowly. An expert, like Valentine, may be able to "snap" them out with safety, but do not try it until you, too, are an expert.

Facility in using urethral instruments is gained only by long and persevering practice. It is tricky surgery and should be studied under a master. All the time so occupied is well spent, however, for gentleness and avoidance of pain win friends and make reputations.

Odds and Ends

A small lump of sal-soda (sodium carbonate), slightly moistened and applied to **moles, warts** and scaly spots, morning and night, will remove these blemishes without pain or injury to the skin.

Two or three tablets of allonal, dissolved in a glassful of hot water, makes an efficacious gargle for ordinary **sore throat** or an inflamed uvula. Another good gargle and mouth wash is made by dissolving a teaspoonful each of common salt and sodium bicarbonate in a glassful of hot water.

Obstinate **coughs** of all kinds, including whooping-cough, frequently yield to thiocol syrup, in doses of 1 to 4 drams (4 to 16 cc.) three times a day. The addition of a tablet (1½ grain—95 mgm.) of allonal at bedtime is often very helpful. Children respond well to small doses of the syrup alone.

Isacen has given good results in my hands, acting as a laxative, cathartic or purgative, according to dosage.

Magnesium sulphate, given hypodermically in doses of one or two grains, in solution, seems to act as a laxative and is useful where, for any reason, medicines cannot be given by mouth and enemas are not retained. It is harmless and worth trying.

Ether, poured over the chest and abdomen, in cases of **coma** following accidents, almost always restores consciousness. Its action is very powerful. A "dead drunk" comes to life promptly.

Severe **sciatica** can sometimes be relieved by large doses (16 to 20 grains—1.0 to 1.35 Gm.) of *quinine sulphate*, even when an opiate has failed.

Poultices in **pneumonia** may be out of date, but one made of antiphlogistine, covered with absorbent cotton and a cheese-cloth jacket, so as to envelop the chest, gives a pleasing sense of warmth and support and may be left in place until the crisis is past. This is especially valuable in country homes, where plenty of fresh air and good nursing complete the treatment.

Senna leaves, tied in a cheese-cloth bag and cooked with prunes, do actually medicate the fruit. Let those who doubt make the experiment of eating half a dozen prunes so cooked.

Science is giving us new drugs and new methods of treatment almost every day, and most of them are valuable; but few of us have realized the full possibilities of the older remedies, with which we are familiar, and the practitioner cannot afford to scoff at or throw aside the methods which, however empirically, have been giving results for years, in the hands of his confreres.

496 Southside Ave.

Solenoidal Ionization

By H. B. CROCKER, M.D., San Francisco, Calif.

THE solenoid was first used in therapeutics about forty years ago, at a time when there was little knowledge of magnetism and none whatever of electrons, but merely a suspicion, in the minds of some advanced physicists, that the atom was not the ultimate unit of matter.

The results claimed for the solenoid by the ignorant charlatans of that period, were not generally accepted by the medical profession. It is not surprising that the solenoid fell into a disrepute which our recent investigation has shown to be undeserved. We have all been impressed by the activity in the commercial application of magnetism, and it was upon the presumption that this mysterious cosmic force, which penetrates all matter, might be of some value in the treatment of human ailments, that we began our experimental work and clinical observation, some two years ago.

Organic function has been demonstrated, by Crile and others, to be attended by an electrical discharge of variable degree; and since electricity is directly associated with magnetism, we may reasonably assume that magnetism may be essential to normal functional activity.

Mathews, in discussing the fundamental chemical processes, which are at the bottom of all life of every kind, says: "Life and electricity are indissolubly associated, and every transfer of energy is but so much electric current and magnetic flux."

Since iron is the only element which can retain magnetism for any appreciable time, we may also assume that the body magnetism may be stored in the iron of the blood and conveyed to the body cells. This furnishes a plausible reason for the saturation of the body with magnetism from the solenoid.

The large solenoid, which we have had constructed for our work, contains over twelve thousand feet of 22-gauge, copper wire, wound upon a frame of buckram two feet in diameter, which is sufficiently large for the ordinary person's body. The winding is made in three sections, so that the magnetism can be limited to any part of the trunk desired. We have found that different reactions are obtained in the thoracic, gastric, splanchnic, and pelvic sectors, and it is usually necessary to avoid the thorax entirely when there are cardiac lesions.

In our use of the solenoid, we have found it essential that the patient be recumbent upon a couch, lying either upon the back or right side. The stomach should be free from food.

Previous to treatment, every patient is given a draught of distilled water which holds in solution salts of the four basic elements: calcium, sodium, potassium, and magnesium. We have determined, experimentally, that this alkaline mixture greatly increase the electrolytic action of the solenoid.

The commercial 110-volt alternating current is used, and the patient remains entirely relaxed within the magnetic field of the solenoid for from five to twenty minutes. There should be careful observation of pulse and respiration. The first treatment should be brief. There can be a gradual increase of duration as the tolerance and reaction is established. We have found more satisfactory results from about a ten-minute treatment. Extreme relaxation often results from a long application. So far as possible, it is best to include the affected area within the circle of the solenoid. This is especially true if there be swelling or localized pain due to congestion. We have not been favorably impressed by the use of the direct current.

Solenoidal ionization can be employed together with any other appropriate medication. In chronic ailments, there should be a corrective diet. The ingestion of sufficient water is absolutely essential to assist in the elimination resulting from the increased metabolism. The accumulated products of cellular activity must first be oxidized, then put in solution, before osmosis and elimination can be accomplished. Elimination must begin in the tissues.

The increased oxidation resulting from the use of the solenoid, gives us a means of overcoming the condition known under the general term, autointoxication. It is not unreasonable to anticipate favorable results in the myriad manifestations of toxemia, which every physician recognizes as the causative or contributing factor in

most chronic ailments and many acute conditions.

Up to the present writing, we have demonstrated, to our own satisfaction, that solenoidal ionization causes vasomotor dilatation, increases metabolism, and stimulates absorbtion and elimination. There is a manifest decrease of tension and an increase of vitality. There is a stimulating effect, rather noticeable during the early treatments. There appears to be a point of saturation which must be anticipated and treatments given at greater intervals to avoid reaction.

Every case is an individual problem requiring close observation, careful analysis and modification of the treatment. No routine, empiric methods can give satisfactory results or establish ionization on a scientific basis satisfactory to the profession. We do not wish to be either overenthusiastic or premature, but we consider our results sufficiently satisfactory to justify this report, in the hope that it will stimulate other physicians to a renewed interest in the solenoid.

During the past two years, we have used the solenoid in several hundred cases, with varying degrees of satisfaction. Probably the most uniform effect was evidenced in high blood pressure which was promptly reduced, the normal being reached usually within one month.

I have taken many hundred blood pressure tests on patients before and after ionization. No reading was taken during treatment. I found that the limit of reduction was attained about fifteen minutes after treatment. The usual reduction of systolic pressure was about 8 to 12 mm. but I had several reductions of 30 to 40 mm., with a ten-minute treatment. The high pressure recurs within a few hours, but not so high as at first, and there is a steady daily decrease until a condition approaching normal is attained. This can be maintained by regulation of living conditions and an occasional ionization. In every case, it is necessary to determine the cause in order to insure permanent reduction; but the solenoid gives an immediate effect which is very gratifying to the patient.

There is no effect on temperature. The pulse rate is generally increased at beginning treatment, possibly due to nervousness, but after a few minutes the pulse becomes slower and fuller. The effect on the pulse in goiter cases is very evident, and patients notice it early in treatment.

Metabolism tests were made in many cases, by another physician who is familiar with that work. His reports from the clinic were sufficiently satisfactory. I personally determined the increased urinary solids.

In 547 cases of **high blood pressure,** reduction occurred in every case *at treatment.* Permanent reduction was accomplished in about 200 cases, under restriction. No permanent results were seen in arteriosclerosis.

Arthritis showed satisfactory results in fully 75 percent of the cases. Pain usually moderated rapidly and mobility was restored in all except those in whom the ankylosis was of many years' duration. In 72 cases of various types, pain was relieved in all. Of these, 30 cases have entirely recovered, except for some deformity. In all these cases there were periods of *increased* discomfort during treatment. Some 20 cases were not benefited, except by relief of pain. All others were improved in varying degree, except those of gonorrheal origin, which did not react satisfactorily and treatment was discontinued, usually after a week or two.

In 27 cases of **muscular rheumatism,** mostly in old people, there were no failures in those cases where it was possible to correct living conditions. Without regulation of diet, there is nothing much to be gained by ionization, though there is usually some improvement. No rheumatic cases are now taken without absolute control.

In 24 cases of **sciatica and lumbago,** immediate relief occurred. In 5 cases permanent recovery followed only a few treatments. Eleven cases recovered within one month; others were not benefited beyond some relief at treatment .

Of 16 cases of **neuralgia and neuritis,** nearly all were relieved, at first; 4 severe cases were permanently cured; 2 facial cases were benefited only slightly; 4 brachial cases showed most satisfactory results.

Varicose veins were markedly reduced and the pain was generally relieved promptly in 27 cases.

Diabetic Ulcers, occurring in 2 patients, healed. One case of diabetic gangrene of the toe is not extending. The pain of ulcers was markedly relieved. Six varicose ulcers all healed.

There were 16 cases of **asthma and bronchitis.** In about half these there was no

benefit, but 3 cases of asthma are completely recovered and 1 case of bronchitis in an old lady. Many treatments were required.

In 28 cases of *pulmonary tuberculosis* of varying ages and conditions, decrease of afternoon temperature was observed in all cases, and general improvement in 16 cases, probably due largely to increased assimilation of the diet prescribed.

Goiter was favorably affected, with decrease of tension and pulse rate and a gradual decrease of the tumor. Fatty tumors were rapidly absorbed; 2, out of 6 cases, within 10 days.

Eczema showed rapid improvement, itching usually being relieved by the first treatment. Infants with eczema were very satisfactory patients. The dry eruptions were most stubborn. No results were obtained in psoriasis and ichthyosis.

Constipation was corrected in more than half the cases, sometimes with considerable disturbance for several days, due to liver stimulation.

The pain of gastric ulcer was promptly relieved and a general improvement was evident, with decreased acidity. *Insomnia* and various nervous conditions showed improvement. Epilepsy was only slightly affected.

In *prostatic enlargement*, with irritability and tenesmus, the results were extremely gratifying, the relief being immediate. In cases of senility in men of middle age, the vitalizing effect was remarkable, according to the enthusiastic statements of the patients. Many cases of general debility and weakness, in which no definite diagnosis was made, show general improved conditions. There were several cases in which sphincter control was restored.

Conclusion

Organic function is the result of the concerted activity of a community of cells. These cells must be stimulated by some form of energy, derived, ultimately, from the source of all energy. Physiologic harmony, in the final analysis, depends upon cellular activity, and cellular activity depends upon the vibration of the electrons composing the atoms of the cell elements.

I believe that saturation with magnetism may enable us to approach or attain a condition of harmonious vibration with the energy permeating all matter; that the solenoid is worthy of a place in advanced therapy; and that the theory advanced herewith will appeal to those physicians who are not grossly materialistic, and who recognize that there are still many things for us to learn about the practical applications of energy and vibration.

210 Post St.

The Medical Treatment of Prostatism and Metabolic Disorders

By W. T. CRAWFORD, M.D., Fowler, Calif.

AMONG the distressing conditions which afflict the aged, the various prostatic syndromes are frequent and troublesome. During 40 years of practice I have tried various methods of treatment, with more or less or no results, until I began carrying out the suggestions here outlined.

In this article I shall not discuss the pathology, history nor operative treatment of prostatic disease, but shall merely outline the medical treatment which has been successful in my hands and report a few typical cases.

It seems now to be an established fact that the prostate gland is a vital factor in the male economy, as it appears to be closely involved with the testes and thyroid in maintaining the gonadal balance.

The commonest symptoms which bring the prostatic patient to the physician are frequent and painful urination. Many other factors are, however, involved as, for instance, various focal infections, gastrointestinal and metabolic disturbances, hemorrhoids, etc.

Diet

One of the most important features of the treatment of these cases is the selection and enforcing of a proper diet. This should consist chiefly of the base-forming foods—green vegetables, fruits, etc.—with a minimum quantity of the acid-forming foods, especially the flesh proteins. In most cases the total quantity of food taken must be decidedly decreased. Meals should be small, simple, regular and well masticated. Condiments, pickles, spices, rich soups, gravies, salad dressings, canned meats, pastries and hot breads should be elim-

inated entirely. If there are no contraindications and the patient is accustomed to the use of coffee, one cup, hot and without cream or sugar, may be taken at the end of the meal; otherwise all stimulating beverages should be avoided.

Drugs and Endocrine Products

The endocrine phase of the treatment is, I believe, of considerable importance, as all cases have shown more prompt and positive improvement since these substances have been used.

I am in the habit of using drugs in the treatment of disease and have familiarized myself with their actions so that I know what to expect when I give them. I shall mention the drugs I have used in these cases, specifically and without apology. Moreover, I dispense my own remedies, for the following reasons: (1) Your patient gets what you want him to have; (2) He comes back to you when he needs more; (3) Your prescriptions do not become commercialized; (4) Your satisfied patients send their friends; (5) Your prescriptions are not open to the scrutiny and comments of other physicians.

The patients whose cases I shall report range in age from 64 to 88 years, and all but two have been under my professional care for more than 20 years.

Case Reports

Case 1.—Retired merchant; age 88 years; weight, 120 pounds; below par, physically.

Ten years ago he nearly died from general debility and innutrition. Six weeks in bed, with a carefully regulated diet and the use of digestive ferments led to his recovery. At that time he began to have nocturnal frequency of urination.

Condition at Consultation. Blood pressure 95/50; heart enlarged and moderate arterial sclerosis; appetite poor, tongue heavily coated, bowels sluggish and stools small; urine high-colored, sp. grav. 1030, excessively acid, a trace of albumin and indican, a few casts, crystals and bacteria; prostate much enlarged and painful to the touch; urinating 8 times during the night.

Treatment. For the acidity I gave:

℞. Potass. Citrat.....ʒ iv (16.00)
Sod. Bicarb.....ʒ v (20.00)
Syr. Limon.....ʒ i (32.00)
Aq. Menth Pip. q.s.
ad .....ʒ iv (120.00)

M et Sig.:—A teaspoonful in water, every 2 to 4 hours, as needed to relieve urinary acidity.

I also prescribed a daily morning dose of salithia in a glass of water, taken after effervescence had ceased, and enteric-coated pills of neutral acriflavine (Abbott), four times a day. Later I gave calcalith, with pil. methyene blue comp. (Upjohn) until all bacteria disappeared from the urine.

The second month the salithia was continued, with a cascarophen pill at night, and the following formula was given:

℞. Thyroid subst.....gr. xx (1.30)
Orchic subst.....gr. cc (13.0)
Papain .....gr. cc (13.0)
Pancreatin .....gr. cc (13.0)
Prostate subst.....gr. ccc (19.50)

M et ft. Capsul. (No. 0) No. 100.

Sig.—One before each meal.

For relief of the prostatic pain I prescribed suppositories containing opium, belladonna, gallic acid, ichthyol and ol. theobromat. Later, anusol suppositories were used.

After two months the capsules were changed by adding 100 grains each of suprarenal substance and taka diastase, in place of the pancreatin. These were taken for 3 months.

The patiest now sleeps all night without voiding and has no trouble with his prostate. He takes one cascarophen tablet at night and has three stools daily. He appears to be in good condition for one who has taken little or no care of himself during a long life.

Case 2.—Retired farmer; corpulent and sluggish; a prodigious eater of rich foods.

This patient had visited a number of prominent urologists and twice had nearly died of uremia, having had suprapubic punctures to empty his bladder, as the urethra was practically closed by stricture and suppurative prostatitis.

Condition on Consultation: General asthenia; blood pressure low; tachycardia; short, panting, hurried respiration; constant desire to urinate but voidings small and difficult. The urine was an emulsion of pus and debris—required filtration before examination. Sp. grav. high; hyperacid.

Treatment, consisting of methenamin, methylene blue pills, arbutin and calcium sulphide to saturation, greatly modified the conditions.

The second month the calcium sulphide was continued and a suppository containing morphine, belladonna and ichthyol was used every 6 to 8 hours.

The following capsule was prescribed:

℞. Parathyroid Subst.....gr. x (0.650)
Suprarenal Subst.....gr. l (3.25)
Ext. Cascara Sagrada.
gr. c (6.50)
Amylopsin .....gr. cc (13.00)
Papain .....gr. cc (13.00)
Prostate Subst.....gr. ccc (19.50)

M et ft. Capsul (No. 0) No. 100.

Sig.—One before each meal, with a 5-grain tablet of orchic substance.

This treatment was continued, at intervals, for 2 years, with gratifying results. Saline laxative and salithia were given as required. The patient died of influenza at the end of the second year.

Case 3.—Retired minister; age 74; very obese; a ponderous eater of rich foods; suffered for years from asthma and bronchitis, with frequent attacks of acute rhinitis.

Condition on Consultation. Abdomen large and tense, with intestines dilated; stools small, clay-colored, sometimes ribbon-like; appendix and gall-bladder regions tender on pressure; blood pressure 240/120; extreme vertigo; prostate much enlarged but not inflamed; hemorrhoids present; urination slow and difficult, with frequent voiding day and night; urine findings, sp. grav. 1035, much debris, phosphates and acidity in excess.

Treatment. For the urinary acidity, the potassium citrate mixture given to Case 1, also citrocarbonate.

℞. Thyroid Subst.....gr. c (6.50)
Ext. Cascara Sagrada gr. c (6.50)
Juglandoid .....gr. c (6.50)
Pancreas Subst.....gr. ccc (19.50)
Prostate Subst. .....gr. ccc (19.50)
M et ft. Capsul. (No. 0) No. 100.
Sig.—One before each meal.

The diet was strictly regulated, eliminating all proteins, and giving chiefly such alkali-forming foods as fruit and vegetables, with coarse, whole-wheat bread and little starch or sugar.

The symptoms in this case have cleared up; the patient has lost 20 pounds in weight and now sleeps all night. The diet is being continued.

Case 4.—Farm laborer; age 69; overweight and overeats of poorly-chosen foods.

Condition on Consultation. Complained of headache, vertigo and nocturnal frequency of urination; constipated; tachycardia, with accentuated second sound and shallow respiration; blood pressure 240/120; prostate much enlarged; urine, sp. grav. 1025, hyperacid, albumin and bile present.

Treatment. Potassium citrate mixture, as in Case 1; alkaline rhubarb mixture*, one dose at bedtime.

℞. Ext. podophyllin.....gr. x (0.65)
Ext. Cascara Sagr.....gr. c (6.50)
Leptandroid .....gr. c (6.50)
Pancreas subst. .....gr. ccl (16.25)
Papain .....gr. ccl (16.25)
Prostate subst.....gr. ccl (16.25)
M et ft. Capsul. (No. 0) No. 100.
Sig.—One before meals.

Later I replaced the leptandroid with ½ grain of thyroid substance to each dose.

The alkaline rhubarb mixture and alkaline mixture No. 2† were also given.

Case 5.—Carpenter; age 64; thin and active man; has had frequent "bilious attacks," with vertigo and vomiting.

Condition on Consultation. Blood pressure, 280/100; marked arteriosclerosis; heart enlarged, with tachycardia and intermittent rhythm; carbohydrate intolerance; liver function deficient and gall-bladder contained stones; spastic constipation with extreme abdominal flatulence; hemorrhoids; prostate much enlarged and sensitive; urination frequent and difficult; urine findings, sp. grav. 1040, extreme hyperacidity, excess of phosphates, albumin moderate.

Treatment. Alkaline rhubarb mixture, 4 times a day—this reduced the acidity, regulated the bowels and relieved the flatulence.

℞. Thyroid Subst. .....gr. xx (1.325)
Ext. Cascara Sagr.....gr. c (6.50)
Bilein .....gr. c (6.50)
Papain .....gr. cc (13.00)
Pancreas Subst.....gr. cc (13.00)
Prostate Subst.....gr. ccc (19.50)
M et ft. Capsul (No. 0) No. 100.
Sig.—One before meals, with 5 grains of orchic substance.

Four months' treatment (the last two with alkaline mixture No. 2), two courses of anusol suppositories and rigid regulation of an extremely faulty diet enabled the patient to return to work feeling well and with greatly reduced blood pressure.

Case 6. Wealthy farmer and Y. M. C. A. worker; age 74; obese and a heavy eater; frequent "bilious attacks"; blood pressure (15 years ago) 180/80; many abscessed teeth had been removed, with partial relief of symptoms.

Condition on Consultation. Obstipation—no bowel movement without strong cathartics; stomach dilated and prolapsed, with much belching and moderate pain; large internal hemorrhoids; extreme urinary frequency, day and night; urine dark and of high sp. grav., acid and phosphates in excess, indican present.

Treatment. Attempts to regulate the diet were not very successful; a number of alkaline formulas were used, at intervals, for a long time; various strong cathartics and lubricating mixtures were used, but saline laxative (Abbott) seemed to give best results.

℞. Thyroid Subst.....gr. xl (2.65)
Ext. Cascara Sagr.....gr. c (6.50)
Leptandroid .....gr. c (6.50)
Amylopsin .....gr. cc (26.00)
Prostate Subst. .....gr. ccc (19.50)
M et ft. Capsul. (No. 0) No. 100.
Sig.—One before meals, with a 5-grain tablet of orchic substance.

Anusol suppositories relieved the hemorrhoids.

After continuing this treatment for a considerable period, varying the digestive ferments in the capsules (pancreatin, pancreas subst., papain) most of the disagreeable symptoms, especially the nocturia, were relieved.

Conclusions

1.—In order to relieve cases of this kind, all foci of infection and other pathologic conditions must be found and cleared up. Vaccines are often useful in doing this.

2.—We are responsible for many of our toxemias, which are due to a highly irra-

*℞. Magnes. Carb. .....℥ iv (16.00)
Pulv. Rhei. .....℥ iv (16.00)
Saccharum pulv. .....℥ i (32.00)
Sod. Bicarb. .....℥ ii (64.00)
Ol. Menth. pip.....gtt xx (1.32)
M et Sig.—A teaspoonful, in water, after meals.

†℞. Sod. Bicarb. .....℥ i (32.00)
Magnes. Carb. .....℥ i (32.00)
Ol. Menth. pip.....gtt x (0.65)
M et Sig.—A teaspoonful in water after meals.

tional diet--too much protein, too little roughage, lack of mineral elements and vitamines, etc.

3.—The proper selection of foods with regard to their acid- and base-forming properties is of more importance than attention to their caloric values.

4.—Many younger men have responded well to regulation of the diet and remineralization.

5.—The endocrine products are valuable adjuncts in the treatment of metabolic disorders in elderly patients.

Esophageal Carcinoma

(A Case Report)

By CARL F. BIGONEY, M.D., Lansdale, Pa.

I REPORT this case on account of its long standing, its rather unusual characteristics and the fact that, despite the seriousness of the condition, the patient has lived for several years after her demise was anticipated.

Miss B., age 63, comes from a good old Pennsylvania family. Her *family history* is entirely negative, other than that one sister died of gastric carcinoma nine years ago.

Up to 1890 the patient was perfectly well. So far as she recalls, she suffered from none of the symptoms relative to her present condition. She consulted a physician in 1890 for various undefined symptoms. The case was diagnosed as gastric ulcer, and she was treated medically and probably dietetically.

In 1900, there having been a recrudescence of the symptoms, she entered the Medico-Chirugical Hospital, in Philadelphia. For one month prior to her entrance to the hospital, the only nourishment the patient was able to take was per rectum.

An operation was performed by the late Dr. W. L. Rodman and, incidentally, he used the Murphy button for the first time in that hospital. The pyloric opening of the stomach was found to be so small that a probe could not enter the orifice, and the stomach itself was much smaller than normal. For a year following the operation the patient made fairly normal progress, other than having frequent attacks of vomiting.

During 1901, the vomiting became so frequent that she returned to the hospital. In an attempt to control the vomiting the actual cautery was used. This had no effect. The vomiting continued and became worse, up to 1905. The patient ate what she desired, but practically always regurgitated her food.

In 1905, Dr. John B. Deaver did a gastrotomy, but could ascertain nothing amiss with that organ. He did, however, find adhesions around the bile ducts, and these were broken up. The patient seemed to be no better after operation, and from 1905 to 1919 she continued as a practical invalid, with constant attacks of vomiting and marked abdominal pain. From 1905 up to the present time, this woman has lived exclusively on a liquid diet.

In 1919 she was again operated upon, for ulcers of the descending colon. Up to that year she had maintained her weight fairly well. Between 1919 and 1921 she developed an increasing muscular weakness. Not being able to go into Philadelphia, a Philadelphia physician made weekly trips to call upon her and to wash out her stomach. The stomach washing, during the intervals, being carried out by a nurse.

I first saw Miss B. in the summer of 1922. I was summoned on account of a serious "sinking spell," which followed the washing of the stomach by the nurse. Great difficulty had been experienced at this time in passing the tube and I found the patient weak and very much shocked. She responded to a hypodermic injection of strychnine. Her regular physician was summoned, and at the consultation he asked me to associate myself with him in the conduct of the case.

During the fall of 1922 the patient was taken to Anderson Hospital, Philadelphia, for x-ray study, on account of the constant and pernicious vomiting and general weakness. She remained there for a time, taking treatment and being given many special diets, but without the slightest sign of success.

She was then removed to Pennsylvania Hospital for a complete fluoroscopic examination. I was present and had the opportunity of observing the patient under the fluoroscope. The usual mixture of barium and buttermilk was given, but Miss B. had great difficulty in swallowing, because of

the constant regurgitation of the mixture. Under the fluoroscope this regurgitation seemed to be caused by a violent constriction of the upper end of the esophagus the moment it was reached by the barium mixture. Finally the esophagus relaxed very slowly, allowing a little of the barium to reach the stomach. There was a considerable thickening of the esophagus near the constriction. The heart also played a part in rendering the act of deglutition difficult. At each ventricular beat the heart was pushed against the wall of the esophagus, partly closing it off, and thus retarding the downward progress of the barium mixture. The stomach was found well below the pelvic crest. It was smaller than the normal organ and showed marked muscular atony.

As a result of the fluoroscopic examination and the other features in the case, the physicians in consultation decided that nothing, either surgical or medical, would offer any relief, and made a diagnosis of cancer of the esophagus and the cardiac end of the stomach.

We were advised to remove her to her home and give her as good care as possible. The patient was informed by the consultants that she would probably live not over two months, and they advised her to enjoy herself as much as she could during that time. This met a very prompt and pleasant response on the part of Miss B., who anticipated with great pleasure a prompt relief from her sufferings. She desired only to be made comfortable and to have as little pain as possible.

Upon her removal to her home I found it necessary to wash her stomach every day with large quantities of a solution of sodium bicarbonate, on account of the very persistent and increased vomiting. There was very great difficulty in passing the tube, and the washing consistently produced a dark, olive-green fluid, some times possessing an odor of staleness. Occasionally thick strings of mucus were brought away. The patient's diet at this time consisted of small amounts of predigested liquid foods.

For about six months this treatment was continued and the patient remained in bed practically the entire time, with the exception of occasionally sitting up in a chair.

I was constantly on the lookout for some liquid food which might agree with my patient and, during the spring of 1923, my attention was directed to **Trophonine**, a liquid food containing beef, wheat, malt, egg albumen, cocoa beans and casein, partially predigested. I gave a bottle of this product to Miss B. and advised her to follow the instructions. Much to my surprise, and much more to her's, she was able to retain the Trophonine, and did not vomit. Whereupon, I discontinued all other foods and gave her Trophonine exclusively, with an occasional cup of coffee. She was able to retain both Trophonine and coffee, and the addition of coffee to her very limited dietary gave her much pleasure.

As our efforts in this connection were rewarded with success, I disregarded the instructions on the bottle, and gave Miss B. forced feeding, permitting her to take as much as she could. Within six months after I put her on the exclusive Trophonine diet, she had gained so much in strength that she was able to be about the room during the day.

Throughout the years of 1924-25 Miss B. slowly gained in strength and weight. She was so much improved that she was able to walk down stairs, sit upon the front porch, and even take short walks around the yard and the garden. Improvement was steady, and in the latter part of 1925 she was able to take auto rides, and even to assist in the house work.

In 1926 Miss B's. condition was markedly better in every respect. She discharged her maid and attended to her household duties, with the exception of cooking and cleaning She attended the Sesqui-Centennial Exhibition in Philadelphia, and also visited in Wilmington, Del. She said that she felt better than at any time in 20 years, that she was able to carry on her daily duties with perfect comfort and great enjoyment, and that she had no suffering whatever, except when she became unduly fatigued.

During these years I washed her stomach out frequently, and the contents continued, as before, of a dark, olive-green color. Miss B. vomited only when her stomach went too long unwashed, or when she became too active. Her diet was limited to Trophonine, and she used about one gallon a week.

During the spring of 1927, the patient attempted to assist with the house cleaning and she completely exhausted her strength. There was an immediate return of the old symptoms, with vomiting, profound fatigue, pain in the gastric area and loss of weight. There were also several attacks of neuritis,

and she had several severe hemorrhages from the rectum, which I ascribed to an opening up of the scar tissue at the site of the colonic ulcers.

During the remainder of 1927, Miss B. was kept in bed and her stomach was washed daily, or every other day. During the fall the symptoms began to abate, and she has continued to make improvement.

In view of our past experience I am not allowing her to do anything but the lightest kind of work about the house, and she is not given too much liberty in her choice of her duties. She is now as strong as she was in 1926, and it seems to me that she is likely to continue in this condition for an indefinite period. I doubt very much if she will ever be able to take any form of solid food. At times I have permitted her to chew up a lettuce leaf and to swallow only the saliva, but it is very promptly regurgitated.

Summary

During six years of constant attendance and observation of this case, I have reached the following conclusions:

1.—The washing of the stomach every other day is absolutely essential to the patient's welfare. Experience demonstrates that, if we go longer than two days without inserting the tube into the stomach, the patient lapses into pernicious vomiting, shows signs of a toxemia and a rapid loss of mental and physical strength.

2.—I believe that Trophonine has kept her alive during the past five years, in view of the fact that it is the one product which she has been able to retain in her stomach. Every other liquid food and every means of giving liquid diet has failed us, as she has not been able to retain any other type of food.

3.—It would seem that if this patient is kept fairly quiet, is not allowed to do any work which requires particular strength and continues to be fed on Trophonine, she will live fairly comfortably for an indefinite period.

Diagnostic Rules

1.—When a diagnosis has been reached, all of the symptoms and signs must be compatible with it, otherwise the chances are that it is incorrect.

2.—Where there is an apparent conflict between the subjective and objective symptoms, the latter have greater weight in pointing to the diagnosis.

3.—A diagnosis of a single disease is more likely to be correct than a diagnosis of more than one disease, provided that it suffices to explain all the symptoms and signs present.

4.—When two diseases are possibilities, with apparently equal evidence in favor of each, the chances favor the commoner of the two.

5.—Diagnosis reached by exclusion are dangerous and are apt to be incorrect.

6.—Do not change a diagnosis, reached after careful consideration, without very cogent reasons.

—Blumer's "Bedside Diagnosis".

The Seminar

[NOTE: Our readers are cordially invited to submit fully worked up problems to the *Seminar* and to take part in the discussion of any or all problems submitted.

Discusions should reach this office *not later* than the 1st of the month following the appearance of the problem.

Address all communications intended for this department to *The Seminar*, care CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.]

Problem No. 5

Presented by Dr. Max Thorek, Chicago

(*See* CLIN. MED. AND SURG., *April*, 1928, *p.* 268)

Recapitulation: A woman, 30 years old, twice married and with two healthy children, came for treatment of a multiple, crippling arthritis, dating from her two pregnancies, both of which were followed by violent and prolonged febrile reactions with joint involvement.

She has had a tonsillectomy; her menstruation has always been irregular (she has missed two periods and does not know whether she is pregnant or not); constant dysuria for past 4 years; slight albuminuria since the beginning of her illness; no report of Wassermann test.

Bimanual examination shows definite pain and enlargement of the adnexal structures on both sides.

Requirement: Under the conditions of the problem, what should be done for this patient?

Discussion by Dr. Jacob Jacobson, Chicago

It is my opinion that the infection was a mixed affair, containing the gonococcus, the several staphylococci, and streptococci. The gonococci found their way to the joints. The staphylococci and streptococci produced a metritis, double salpingitis, pelvic peritonitis and a septicemia.

As for treatment, that is clear-cut. First we must remove the focus of infection. This we will find in the cervical canal and in the tubes. If the cervix is cauterized, the tubes removed and any other pelvic condition taken care of, one can then proceed to build the patient up with ultraviolet rays, tonics, fresh air and good food. Manipualtion of the joints should be done cautiously. Although we may improve them, I do not think they will ever be normal again. Local treatment may be undertaken with 5-percent silvol solution every day.

If the patient is pregnant, the salpingectomy will cause her to abort. This should not cause the commotion the previous labors did.

The question of doing a hysterectomy might come up. I think the shock too great for so weak a patient.

Medical treatment for the joint conditions, especially in a gonorrheal type, is disappointing but I have found vaccines and salicylates efficacious. One might try the castor oil treatment. Some claim very good results with it in rheumatism, neuritis and arthritis.

Discussion by Dr. Chas. E. B. Flagg, San Antonio, Tex.

I would be inclined to open the abdomen and remove the pus tubes, and, if practicable, free the uterus from adhesions; then, in due time, proceed to eradicate other possible foci of infection, having in mind the cervical glands, Bartholin's and Skene's glands, and the urethra. An autogenous vaccine from the tubes might help to clear up the joint involvement. After this, "baking," diathermy, etc., would be in order.

The patient had been married for four years and had had dysuria for four years. Was she married twice in four years, or had she been married and had her first baby before 1920 when her tonsillectomy was done? What are the ages of her children? Menstruation has always been irregular. Does that include her prenuptial state? She presumably contracted gonorrhea prior to the birth of her first child, and had a bilateral salpingitis after the birth of the second.

If she is of the Roman Catholic faith, nothing should be done until the absence of pregnancy can be assured. If she is pregnant and a Roman Catholic, she should be permitted to give birth to the third child, and get some more joints involved thereafter, or possibly a fatal endocarditis.

From a modern scientific and moral standpoint the presence of pregnancy would not contraindicate salpingectomy if this was indicated for preserving the life of the mother.

I wager Dr. Thorek has long since removed those tubes.

Discussion by Dr. Fred Drury Hollenbeck, Chicago*

My diagnosis is chronic gonorrheal arthritis, secondary to chronic pelvic infection due to some germ. From the history and findings, it could not well be anything else.

The original focus being in the pelvis accounts for its lighting up a new area after the terrific disturbance of labor, and the prolonged temperature and prostration suggests a secondary infection with some low-grade organism, working hand in hand with the gonococcus. The history is typical and the findings (involvement of both tubes) confirm the story told by the history.

Treatment: Usual medical care given this type of infection until a quiescent period is reached, and then operate and remove the parts that harbor the infection.

It is unlikely that pregnancy exists, if the finding that both tubes are involved is correct. In any case, pregnancy should be ignored.

Discussion by Dr. E. C. Junger, Soldier, Ia.

This problem is a good one for differences of opinion based on other than scientific reasons.

If this female, age 30, were my patient I should give her the choice of undergoing a complete hysterectomy at once, or of ceasing to bother me with her troubles. With a double salpingitis (perhaps purulent); a uterus adherent in a retroflexed position; a chronic urethritis; high temperatures after previous confinements; and several ankylosed joints, she has enough pathologic conditions to call for some radical procedure to remove a focus of infection. I say *operate* and let those with reasonably normal bodies raise the babies.

Don't call in any church dignitaries to help decide on this hysterectomy. This is purely a surgical subject!

Discussion by Dr. George B. Lake, Chicago

Many, if not most, cases of arthritis originate from foci of infection, and in this case the primary focus is not far to seek. The description of the pelvic findings gives evidence of sufficient morbid changes to account for almost anything.

The first indication in cases of focal infection is to *remove the focus*. In my opinion, this woman should have a laparotomy, with the understanding, expressed *in writing* and signed by the patient and her husband, that all structures found diseased are to be removed, even though this requires a complete hysterectomy, with removal of all pelvic organs. Care should, of course, be taken to preserve as much as possible of the ovarian tissue, so as not to unsex her.

The denial of venereal history, and even one or two negative Wassermann tests, mean nothing. It might be well to give her a course of antisyphilitic medication prior to operation, *avoiding* the use of the iodides, which would have a tendency to break down fibrinous barriers and release any encapsulated collections of pus which may be present.

With a double pyosalpinx, which seems to be present in this case, pregnancy is improbable, but its presence or absence has no bearing upon the surgical indications. If pregnant, this woman should be disembarrassed as promptly as possible.

When her various infections have been removed and all possible benefit from these measures has been obtained, the remaining joint deformity might yield to intravenous injections of 100 cc. of a 1-percent solution of ammonium o-iodoxybenzoate (Amiodoxyl Benzoate), repeated at intervals of one week. Reports indicate that this drug offers the best hopes of amelioration in cases like this.

Solution by Dr. Max Thorek, Chicago

Every man believes that his own affairs and problems are the most important ones. Truly, I am not different from the rest, and somehow I feel that the problem presented for discussion is a rather interesting and important one. It is gratifying to note that my discussants fully agree with me that drastic measures seem inevitable to get the desired results and that we are face to face with a desperate situation that should be treated promptly.

It is easy to say "clear up the focus of infection" but there is where the rub comes in. In the female genital tract, there are so many places where a latent focus may raise a lot of disturbance that it is frequently wellnigh impossible, even with the closest scrutiny and greatest of care, to decide definitely where that focus is.

Dr. Flagg has stated that he would "open the abdomen and remove the infected tubes and, if practicable, free the uterus from adhesions," and from his discussion you will see what further therapy he woud institute. That is just exactly what was done with our patient and she went on to an uneventful recovery with the exception, of

*This discussion was received after Dr. Thorek's solution had been written.

course, that her joint involvement is still there and under treatment, practically as outlined by Dr. Flagg, making rapid progress.

Dr. Junger is not quite so concerned. He advises a complete hysterectomy. Some surgeons would undoubtedly endorse such procedure. So should I, provided the uterus was definitely infected and no hope for its preservation could be expected. But, somehow or other, I very much dislike to take a uterus away from a woman and have her feel, as many of them do, unsexed. Although, let me emphasize again, that with a pelvic infection involving all the organs, the procedure indicated by Dr. Junger is considered sound surgical practice.

I must disagree with Dr. Jacobson that a salpingectomy will cause the patient to abort. Many of us have operated on patients time and again when, not only the tubes were removed, but fibroids from the uterus have been taken away, and the pregnancy, nevertheless, went on to full term. Of course, in doing this sort of surgery, one must treat the pregnant uterus with the extremest caution and the utmost gentleness. Manipulations should be strictly limited to the area involved and such things as forcipressure, undue manual manipulations, pressure from laparotomy sponges and too deep insertion of sutures into the muscular substance of the parts must be avoided. If one proceeds thus, there is all likelihood that the patient will go on to term. On the contrary, it is believed in many quarters that, if the ovary containing the corpus luteum is removed, an expulsion of the uterine contents will result. On this point, however, there are also differences of opinion.

In the case under discussion, as we all agree, the most important question was to eliminate the infected tissues, to avoid further flaring up of the latent foci, and to avoid possible disaster from general sepsis.

Unfortunately, not so many discussions have come in on this problem as I expected. This I attribute, perhaps, to the fact that many of our readers did not feel inclined to discuss a case openly where a question of gestation might be involved. I admire the men who speak their mind fully, but I also have a great deal of respect for the man who thinks a great deal and is a good listener. Be this as it may, however, the editor has seen fit to join the ranks of discussants of this problem and I am delighted to have a chance to tell George Lake where we stand on this problem.

Those of you who have never met George, do not perhaps know that he enjoys a good controversy, provided both sides know whereof they speak. I shall read his discussion *verbatim et literatim*. I hope that I can find something with which to disagree.

Good! Here it is, the first crack out of the box! "Many, if not most, cases of arthritis originate from foci of infection," begins his discussion. I believe that *all* cases of arthritis are due to infection, with one exception, and that is the class that comes under the heading of irritations (metabolic poisons).

In the second paragraph, Dr. Lake strongly suggests that a written statement be taken from the patient or her husband that all the organs necessary to remove should be ablated, and he adds that no matter how much is taken away, at least a part of the ovarian tissue be left behind.

Now as to the first proposition, I am at variance with the doctor. I am fully aware that, in most hospitals, the patient or nearest relative is required to sign a written permission to operate. While this is an excellent systematic practice, I personally believe that a verbal agreement and an explanation of what might be necessary to do in a certain operation should be all that is necessarily required from the patient. Experience has taught me that no matter how well poised an individual may be, if you ask him to sign such a document prior to a surgical operation, there will be suspicion and doubt instilled in his mind which may have a very deleterious effect on the nervous system. The questions project themselves: "Why did the doctor have me sign that paper? Is he going to do something for which he needs legal fortification?" I have been told by many of my confreres that a great deal has occurred from time to time by insisting on obtaining a signed permission from the patient, thus increasing his fears about undergoing surgical procedure. This question, I believe, makes a splendid subject for discussion in the *Seminar*, and it will be well worth while to feel the pulse of our readers and to find out from them whether they approve of obtaining the signature of the patient prior to operation or not.

The second proposition propounded by Dr. Lake I fully agree with. I believe it gross negligence and malpractice to a high degree to remove all ovarian tissue

during a gynecologic operation. Knowing as much as we now do about the importance of internal secretions of the female gonad, the careful surgeon and progressive man endeavors to save the structure as much as possible during any surgical intervention. By careful dissection, by a thorough knowledge of anatomy, one usually is able to save sufficient ovarian tissue to supply the ovarian hormone so essential to the wellbeing of the patient. Thank God that the day of wholesale castration of women has passed and that a great deal of knowledge has accummulated on ovarian physiology, pathology and therapy!

Dr. Lake advises giving the patient a course of antisyphilitic treatment prior to operation. Theoretically this sounds good. Practically it will not work. From a practical point of view, after a denial of venereal infection, and the absence of a positive Wassermann reaction, I would not be inclined to subject the patient to antisyphilitic treatment: besides, we are not dealing in this case with a condition that gives even the remotest history of spirochetal infection; this points directly to a pyogenic infection of some sort. Now suppose we were to listen to Dr. Lake's advice and subject this patient to the treatment he suggests, why avoid the iodides? Are not chronic spirochetal manifestations influenced favorably by iodides? But then, the doctor says that he is afraid that the iodides may break down a fibrous barrier and liberate some pus. In the first place, pus that has been encapsulated a long time usually is sterile. Secondly, I have very serious doubts whether iodides in this dosage would be sufficient to dissolve a capsule.

With reference to pregnancy in chronic inflammation of the tubes, there are cases where pregnancy does take place despite chronic inflamed condition of the oviduct. Of course, a pyosalpinx in itself means a filling of the Fallopian tubes with pus and occlusion at both ends. In this case, as Dr. Lake justly says, pregnancy was improbable, but its presence or absence has no bearing on the surgical indications.

In conclusion I want to say that, in our case under discussion, amiodoxyl benzoate is being used, and while the patient is improving, it is difficult to say exactly to what the measure of improvement is due. The preparation should receive a further trial, in cases, particularly, where no other medication is advised.

Problem No. 7 (Obstetric-Surgical)
Presented by Dr. C. B. Kenton
Artesian, S. Dak.

The patient was an extremely fat woman, 42 years old, the mother of 12 children. No history was taken, as the case seemed to be an emergency and there was little time for thorough study.

I was called to attend this woman in confinement, but when I arrived the child was born and conditions appeared to be normal.

Six days later I was called again, at 3:00 A.M., and found the patient suffering with colicky pains in the abdomen and vomiting. I saw her again at 11:00 A.M. the same day and found the cramps relieved, but marked tenderness and rigidity present in the umbilical region. I thought of appendicitis and gall-bladder disease, though there was no history to suggest either.

In spite of the fact that she was a very poor surgical risk, because of her obesity and puerperal condition, I decided that a hospital was the only proper place for her and sent her there. The surgeons decided to wait three days before operating, on account of the short time since her confinement (so I was informed by the patient's daughter). After midnight of the day of her arrival in the hospital, her condition became much worse, and she died at 4 o'clock the next morning.

Requirements: (1) Discuss the probable diagnosis in this case, stating what further steps should have been taken to determine the condition present. (2) Were the surgeons at the hospital justified in delaying operation? (3) What course would you have pursued if confronted with a case like this?

Clinical Notes and Practical Suggestions

The Country Doctor

FOR the past several years I have been reading in medical journals the various articles dealing with the scarcity of country doctors, including the article in the April number of CLINICAL MEDICINE AND SURGERY, so I have decided to give my views on the subject, having had twenty-two years' experience in a farming community.

When I located in Minier, in 1906, there were three physicians here and thirteen in the four surrounding towns. Today there are only seven physicians in these five towns and, from my observation, the needs of this community are well taken care of.

In my opinion, the decrease in the number of rural practitioners is not the fault of the higher education and the longer time required to complete a medical education, but of the people themselves. For some reason they do not consider the local physician as being *human*. We are expected to be in our offices at any time of day or night when it suits their convenience to come in. Even at meal time they expect us to get up from the table to look after them, and they act peevish if we do not respond immediately. They even do not hesitate to tell us so. This does not happen occasionally, but sometimes at every meal. In winter time, they manage to have an early dinner and get to the office just at meal time. Just as I was eating my dinner today, a farmer called, at 12:20 P.M., and asked if I were in the office.

Then again, we are not supposed to take a vacation or to get away for a half-day to take in an entertainment. If we do then, "Doc is not tending to his business." It would be an awful crime were he to play golf or go fishing, and they hear of it. When we do go out of town we are supposed to tell every one, as our going and coming are matters of public interest.

Whenever they call us to their homes, we are to drop everything, no matter how many are in the office, and rush out to see them. Nowadays all country calls are hurry calls. They may have been sick for several days, but that does not matter. They even call us out of church (the few times we happen to go), when they could have waited for half an hour. Some of my patients have moved to the city and have told me that the city doctor will not make calls during office hours, and when he comes, does not leave any medicine but gives them prescriptions.

We are also expected to make a diagnosis at the first visit. No such thing as keeping them under observation or waiting for development of the case is tolerated. If we do make a good diagnosis, nothing will be said, but let us make a mistake and the whole country-side knows about it and will not hesitate to remind us of it in years to come.

I do not blame the young graduates for not locating in the rural districts. The lack of laboratory and hospital facilities, the long hours in the office, irregularity of meals, the upkeep of a car and office expenses (especially drugs), the inability to take time for recreation for oneself and family, all tend to make the practice of medicine in the country a drudgery instead of a pleasure.

I am not soured on the country and I expect to stay in this rural community. I am in love with my patients and would not trade for a city practice, but I would like to have some of these organizations which are interested in the welfare of the rural districts go out among these people and do a little missionary work. In a nice, pleasant way they can be told that the doctor is human and would like to be treated as such. Give him the opportunity for a little pleasure, away from the daily grind, and I feel safe to say that, ere long, the doctors will be drifting back to the country.

J. W. ROST, M.D.,

Minier, Ill.

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[Having practiced for a number of years as a country doctor we can corroborate everything that Dr. Rost has said so aptly

and graphically in this communication, and we believe that he has put his finger upon one of the tenderest spots in connection with this alleged shortage of rural practitioners.

The country people want and demand good medical service, but they do not, by their conduct, *deserve* it. Every country doctor could, if he would, duplicate Dr. Rost's stories of the selfishness and lack of human consideration exhibited by people in the rural districts.

No man can do his best work if he is constantly disturbed and pestered, and especially if he is denied the regular vacations which are so necessary to his physical and mental well-being.

This seems to be a matter for education of the people. They probably have never stopped to consider how their conduct appears to the physicians who minister so tirelessly and self-forgetfully to their needs.

As a suggestion; why could not the County Medical Society, as an organization, enlist the cooperation of the various local newspapers in a campaign of education—by editorial comment, if possible; by paid space, if necessary?

It would seem that a committee of the County Society could prepare several brief editorials and several paid advertisements, in the name of the Society, which could give the people of their communities some much-needed information. We should be glad to cooperate with any such committee, or with the secretary of any County Society, by preparing a suggestive editorial or advertisement for their consideration. This is a job for *organized Medicine!*

Another good point which Dr. Rost makes is that there is little value in comparing the actual *number* of physicians in a community with the number present twenty years ago, because with automobiles, good roads, telephones and the like, one physician can probably take efficient care of twice as many people as he could attend to at the beginning of the 20th century. —ED.]

DISABILITY FROM RESPIRATORY DISEASES IN INDUSTRY

A large industrial concern has, for ten years, kept records of the diseases which have caused its employees to lose time from work. A careful tabulation of these records shows that more than half of the absences on account of sickness were due to respiratory diseases—"colds," sore throat, tonsillitis, bronchitis, influenza and pneumonia.

Thirty-five sick-benefit associations, with a membership of nearly 100,000, report that respiratory diseases caused 47 percent of all the cases of illness for which sick-benefits were paid from 1921 to 1926, inclusive.

Of the respiratory diseases, "colds" stand first, having caused 70 percent of the absences due to this group of maladies; influenza is second; and diseases of the pharynx and tonsils, third.

The low point for incidence of respiratory diseases is in July, and the high point in February.

The United States Public Health Service is conducting extensive and important researches into the relation between the working conditions in various industries and the occurrence of respiratory diseases, especially pneumonia, with a view to suggesting measures for their prevention and control.

U. S. PUBLIC HEALTH SERVICE.,
Washington, D. C.

THE CALMETTE VACCINE AGAINST TUBERCULOSIS*

Some six months after Montreal began the immunization of infants against tuberculosis, we took it up. We decided that we would take at least an equal number of similar infants which received no treatment. These two groups of babies would be followed up with the same care.

It is now just a year since the first infant was fed the vaccine. We have now fifty infants under observation who have received the treatment and about twice as many who are acting as controls. In none of the treated babies have any harmful effects been noticed and none of them have died from tuberculosis.

There were four deaths but these were due to causes other than tuberculosis. In the control cases about seven percent have died of tuberculosis. Only a few of the babies have returned to actual contact with open cases of tuberculosis. Some of the mothers died while in the hospital, others have remained separate from the babies and still others, while having tuberculosis, have not had bacilli found in their sputum.

All I can say, therefore, is that vaccination seems to be harmless and that no

*Reprinted from *Child Health Bulletin*, March, 1928.

cases of tuberculosis have developed in those vaccinated. I personally have no fear that the attenuated living bacilli might later gain virulence and years afterwards do damage. As it is well known that even fully virulent bovine bacilli lose their virulence in older children and adults, it would seem impossible for attenuated bacilli to gain greater virulence. I believe, therefore, that we are justified in making a thorough test, since it has been used so extensively in France with apparently successful results.

WILLIAM H. PARK, M.D., Director,
Bureau of Laboratories,
Department of Health,
City of New York.

CHLORAZENE IN PULMONARY TUBERCULOSIS

In 1922, I developed some intestinal trouble, and took some chlorazene tablets to see what effect they would have. Also I was suffering with a cough, which I attributed to excessive cigarette smoking. In three or four days my cough was gone. That started me to thinking that perhaps chlorazene would be useful in that direction, and in a few days' time the opportunity presented itself to make further trial.

Case No. 1.—Female; age 40; married; 6 children; no abortions; youngest child, a girl, age 10, healthy appearance; family poor.

Family history negative for venereal diseases.

This patient had gone the rounds of the Colima doctors, and all had agreed, on two counts; i.e., pulmonary tuberculosis, and an incurable case.

She presented the aspect of a typical case of tuberculosis: loss of weight, afternoon fever; night sweats; could not sleep on account of cough.

Upon *physical examination*, I found the apices of both lungs involved. The microscope showed the sputum to be loaded with tubercle bacilli.

I started her on a ½-percent solution of chlorazene in peppermint water, a tablespoonful every 2 hours, when awake. I gave her 1 liter of the solution, with instructions to return when it was used up. This she did and, to my utter surprise, she stated that the cough was much better, that she was sleeping more, and that the night sweats had almost disappeared; she also noted improvement in her appetite. I then increased the solution to 1-percent, giving the same directions.

In six months' time the sputum became negative for tubercle bacilli and she claimed that she was well; however, I kept her on the same treatment for six months longer, when she had regained her normal weight and became pregnant. The sputum continued negative.

Case No. 2.—Male, age 18, sick for 6 months. Venereal history negative. Diagnosis of tuberculosis confirmed by microscope. Started on ½-percent solution of chlorazene. Died two weeks later of hemorrhage.

After locating in Yxtlan del Rio, Nayarit, I continued using chlorazene with tuberculosis patients, but most of them were employed on railroad construction work, and when they began feeling better they ceased coming for treatment.

After leaving Yxtlan del Rio, I went with the Espada Mines Co., where I continued using chlorazene in tuberculosis cases, with varying results.

While at Zacatecas, I again continued the use of chlorazene, and found that those cases which were admitted to hospital all showed marked improvement in the six months I was there. Diagnosis in every case has been confirmed by the microscope, so I am positive that each patient treated actually had tuberculosis.

Case No. 3.—I was called on February 2, 1928, to see a patient whom I found in bed and who had come home, as she said, to die. Never have I seen a more typical case of pulmonary tuberculosis.

I started her on a ½-percent solution of chlorazene, and increased to a 1-percent solution, giving tablespoonful doses.

She was in my office this morning (April, 1928), looking well and claiming that she is well; but I know differently, for the microscope still shows a few tubercle bacilli.

I am now using a 1-percent solution, by the intravenous route. The patient is showing some improvement—decrease of evening temperature and night sweats and she is eating better.

I began the intravenous injections on March 27, giving a 5-minim (0.325 cc.) dose, with a 5-minim increase daily, up to 1 cc. She complains of a slight burning sensation at the point of injection.

I was not afraid of killing my patient, because I first tried it on myself (as I have no rabbits nor guinea pigs), but I do not know how far I can go or how much I can safely increase the dosage.

It must be remembered that, with these people, I have gone against the superstitions of ages in giving them sunshine and fresh air, as well as insisting upon personal hygiene.

I have had no opportunity to try chlorazene in incipient tuberculosis, as experience has taught me that it is only the well-advanced cases which appeal to the physician for help in this part of the world.

My hope, my sincere wish, is that this account will be the means of inducing the medical profession to try out chlorazene as I have done, for, after all, it is the action of *chlorine gas* that does the work.

I. P. ISRAEL, M.D.,
Villa Saucillo, Chih., Mexico.

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[This is a very surprising suggestion, but not, perhaps, so wild as it may sound on first reading, when we remember the extensive literature and favorable reports on the use of chlorine gas in respiratory affections which occupied a good deal of space in medical periodicals a few years ago. Perhaps the writers of those articles may have overestimated the value of chlorine, but there must have been *some* basis for their enthusiasm.

It does not seem unreasonable that it may be possible to get chlorine into diseased lung tissues through the circulation and it may have some specific effect when it arrives at its destination.

Again, there may be an effect in stimulating *leukocytosis*, which is, perhaps, the greatest factor in overcoming infections.

This suggestion may be worth looking into.—ED.]

THE VITAMINES IN MILK—"B" AND "C"

Milk, it will be remembered, has some of all known vitamines. Vitamines "A" and "D" are found in milk fat—cream and butter.

Two vitamines are soluble in water and are not associated with the fat content of foods. Because these water-soluble vitamines, B and C, unlike vitamine A and (probably) vitamine D, are not stored to any extent in the body, the necessity for a continuous supply from the food is most urgent.

In foods consumed in their natural state, vitamine B is so widely distributed that it is ordinarily present in sufficient abundance to maintain health. In the manufacturing of purified foodstuffs, such as polished rice and milled flour, vitamine B may be lost, and a diet made up entirely of such denatured foods may cause beriberi or even death, owing to a deficiency in this essential substance.

An infant or a child whose food contains too little of this factor may show the deficiency first in lack of appetite, pallor, apathy, and failure to make normal gains in weight. There is practically none of this substance in fats or oils of any kind, pure sugar, starch, polished rice, or white flour. Milk is a good source of vitamine B.

The other water-soluble vitamine (vitamine C) is found especially in acid fruits, such as the lemon, the orange, and the grape fruit, and in the tomato. Fruits and vegetables, especially uncooked, are good sources of both water-soluble vitamines. Vitamine C may be lacking in cow's milk if it is stale, if it has been exposed to a prolonged high temperature, if it has been reheated, or *if an alkali has been added to it.* Cows stall-fed and not supplied with green foods rich in vitamines, such as alfalfa, may produce milk very low in this factor. Summer milk, produced by cows on fresh pasturage, may be three to five times as rich in this vitamine as is winter milk, produced by cows which have been for months on dry feed.

Human milk may be deficient in vitamine C, and scurvy of the breast-fed child has been recorded for many years. As an antiscorbutic, after the first month, orange juice should be given to all infants artificially fed and may be given to breast-fed infants. Many children kept on a diet low in vitamine C do not have symptoms of scurvy, but they are listless and are retarded in growth and development; this may be due to a prescurvy state, induced by lack of vitamine C.

Milk which, when produced under the right conditions and given in sufficient amounts, may contain enough of all these vitamines (except, possibly, vitamine D) to allow normal growth and development has a value in the human dietary greater than that of any other single food.

As a source of energy or fuel for the body, milk compares favorably with other foods. The energy value of a quart of milk is about equivalent to that of a pound of lean meat or of eight eggs.

DOROTHY R. MENDENHALL, M.D.,
Washington, D. C.

LACTIC ACID IN VOMITING OF PREGNANCY

I wish to add my indorsement of Dr. Thompson's choice of a remedy in the case of the child with fat indigestion (see CLIN. MED. AND SURG., April, 1928, p. 274). In my opinion there is none better than lactic acid.

A very sick child, 7 months old, was brought to my office, vomiting severely. After studying the case I administered a dose of lactic acid at once and gave the parents a bottle to take with them. I did not expect the child to live until it reached home, 24 miles distant. A year later the mother reported that, after the first dose, the child ceased vomiting and regained its health rapidly.

This drug is also of value in the vomiting of pregnancy. I have used it in such cases for 14 years, without a failure. The prescription I give is:

℞. Acid Lactic (Malinckrodt, 85%) .....ʒ i (30.00)
Water q.s. ad.....ʒ iv (120.00)

M. et Sig.: Twenty (20) drops, in a wineglassful of water after meals; also between meals, if required, used as a "lemonade".

The first dose usually stops the vomiting, though, in some cases, slight nausea persists.

C. C. PERRY, M.D.,

West Rutland, Vt.

BASIC ETIOLOGY

In connection with Dr. Hamilton's suggestions and the editorial comment thereon (CLIN. MED. & SURG., March, 1928, pp. 201-2), I feel that when you remarked, "Many cases require psychotherapy," you said something important.

"Where there is fuss (as well as pus), let it out" is good advice; but if we can go back of the "fuss" period and find the defect in the patient's manner of living—improper diet, faulty hygiene, etc.—we will get at the remote cause of most of our ailments. I believe in prevention. To do the most good, we must start before the disease begins.

Fire prevention means more than pouring water on the blaze. Why not be real physicians and spend most of our time *preventing* disease, rather than trying to repair the damage after it has been done?

E. C. JUNGER, M.D.,

Soldier, Ia.

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[Dr. Junger has hit a key-note in these few well-chosen words. Curative medicine is still with us and is of immense importance at present, but it is *the medicine of the past* and, from this day forward, its field will be growing smaller.

Preventive medicine is *the medicine of the future* and will, henceforth, be steadily increasing in dignity and importance. If we would maintain our position as the guardians of the Nation's physical welfare, we must learn, not merely to treat disease before it begins, but to begin to treat our patients *before they are born*.—ED.]

INVESTMENT HINTS

A successful realty expert in New York City has outlined what he terms fundamental principles that should enter into any investment in real estate. These fundamentals follow:

1.—Never pay cash. Borrow and pay interest.

2.—Buy when others are not. It takes courage but pays dividends.

3.—Buy property that has monopolistic character—the kind that must increase because it cannot be readily duplicated.

4.—Buy where you think things are going to happen in the future.

5.—Don't buy simply because it is tipped that a railroad station or bridge is going up nearby. Values often increase but these are temporary.

6.—Compare values in different neighborhoods.

7.—Know when to sell. You can never buy at the bottom and sell at the top.

8.—Don't retain unimproved property indefinitely.

9.—Speculation means ability to look ahead and back your judgment. It does not mean gambling.—*Exchange.*

THE ILLINOIS STATE MEDICAL SOCIETY

The Illinois State Medical Society held its 78th annual meeting in Chicago, May 8 to 11, and it was a big occasion. Headquarters and exhibits were at the great Stevens Hotel, and a number of the sessions were held there. Clinical discussions were given at the Medical Colleges of the Universities of Chicago and Illinois and of Northwestern University, as well as at several of the hospitals, including Cook County. It was an excellent opportunity for physicians to "size up" the new medical schools and their work.

The exhibitions, both commercial and scientific, were much more elaborate than one ordinarily sees at a State meeting. Nearly 100 commercial firms showed their products, including some new things, such as an extension splint for the forearm, a

set of tuning forks made of metallic magnesium—much lighter than steel—and several other things. Carbon arc lamps were more conspicuous than ever, a number of models being shown, as well as a wide variety of excellent physical therapy apparatus and a fine lot of drugs and food products.

Among the interesting things in the scientific exhibit was the motorized milk laboratory operated by the State. This fully equipped car can be driven up alongside any milk-producing institution and will be ready to start work in 15 minutes.

Several of the papers read will be abstracted in these columns at an early date. Here are some of the points brought out at a symposium on medical economics which occupied one entire evening session.

Dr. E. P. Sloan, of Bloomington, Ill., said that a **group clinic** does not increase income beyond what the members could earn individually, but it does give the patients better service and it reduces the overhead expense, though there is a tendency for the overhead to become topheavy with unnecessary and expensive laboratory work, and it is difficult to get fees large enough to cover the extra work done.

Group practice makes it easier for the members to take vacations and Dr. Sloan feels that it is preferable to a closed-hospital service, because affairs are controlled by the physicians instead of by a board of laymen.

Dr. W. D. Chapman, of Silvis, Ill., feels that no man with a keen sense of business values would take up general practice.

The general practitioner is changing, and the change will be permanent. Less time is now spent on the road and in treating epidemic diseases. The more scientific *art* of medicine requires a different temperament from that of the older practitioners.

The doctor in general practice tends to be broad and shallow; the specialist, to be deep but narrow.

The public now knows a good deal about hygiene and preventive medicine and *uses* that knowledge. The practitioner must learn to depend more upon medical organizations.

Dr. C. E. Humiston, of Chicago, pointed out that a few years ago a special nurse in a hospital, cost the patient $25 a week, for 24-hour service. The same service now costs $119! A full-time special nurse is not needed in the vast majority of cases and is an expensive luxury. If, however, this nurse divides her services among several patients, all will be adequately cared for and the expense will be reduced for each patient. Such a method is in vogue in Chicago.

Nurses are not properly trained for work in the private home. The students are assigned to routine work and the seriously ill patients are saved for special graduate nurses, at high fees. The students must be given an opportunity to nurse serious cases. There is no place for unions or time-clocks in the care of the sick.

In the discussion, Dr. Geo. B. Lake, of Chicago, remarked that if any physician's economic status is unsatisfactory it is largely his own fault. The keeping of adequate professional and financial records and the adoption of something resembling modern business methods in the doctors' offices would ease the economic situation materially.

We must not hesitate to discuss financial matters with our patients, preferably *before* undertaking the treatment of the case. This is good for everyone concerned. The doctor needs to make no apology for collecting a fee which he has honestly earned.

Dr. G. Henry Mundt, of Chicago, as retiring president of the Society, delivered a thought-provoking address on "The Practice of Medicine; Retrospect and Prospect." The new president, Dr. John E. Tuite, of Rockford, Ill., was installed. Dr. F. O. Fredrickson, of Chicago, was chosen as the new president-elect.

G. B. L., Reporter.

SALT-FREE DIET IN HYPERTENSION

The reduction of high blood pressure can, in most cases, be easily accomplished by the elimination of common salt from the patient's diet.

There are four cardinal rules to be followed:

1.—No excitement.
2.—No undue exertion.
3.—No large meals.
4.—No salt.

Abstinence from meat is not essential. The eating of meat in moderate quantities does not affect the blood pressure adversely. Of paramount importance is the advice to avoid large meals. Many patients know, themselves, that the ingestion of a large quantity of food makes them feel uncomfortable. They may eat a mixed diet, with no restrictions except as to the amount.

Common salt is entirely prohibited; none is to be used in cooking; unsalted butter for table use; no bacon, ham or salt fish.

In two weeks an improvement is noticed. There is a lowering of the blood pressure, and considerable amelioration of the prominent symptoms. In four weeks, in many cases, the pressure will approach normal. There are of course some cases of idiopathic hypertension that do not respond to any form of therapy.

Case Report

Mrs. J. B., age 65; seen Dec. 12th, 1927. She has been treated by a physician for the last six months for high blood pressure, without any benefit. Systolic pressure 170 mm. Is very nervous, has tremor of the hands, much dizziness, and when lying down has a sensation of floating. Moderate dyspnea on exertion, and has to have the head elevated in order to rest at night. Sleeps poorly.

This patient frequently drank a glass of salt and water before retiring, thinking that it was beneficial. She was instructed to follow the four rules outlined, and return in two weeks for examination.

Dec. 28th, 1927: Much better; has no dizzy spells, and the floating sensation on lying down has completely disappeared. Systolic pressure 160 mm.

Jan. 11th, 1928: Can lie recumbent without discomfort, sleeps well, and has no dizziness. Systolic pressure is now 142 mm.

R. STEWART MACARTHUR, M.D.,
Los Angeles, Cal.

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[We cannot agree with Dr. MacArthur that the treatment of arterial hypertension is so simple as he seems to feel it is. There are too many types of high blood pressure and too many etiologic factors in different cases to permit us to accept, without question, the statement that a salt-free diet will cure or relieve them all, or even most of them.

There is little question that the cases of hypertension which are secondary to organic renal disease are much improved by eliminating salt from the diet, but this is by no means generally true in cases of essential hypertension or in those which follow arteriosclerosis without excessive renal involvement.

This is a helpful suggestion and one with which it will be harmless to experiment, but we must be careful not to delude ourselves with the impression that high blood pressure is so easy and obvious a problem to solve as Dr. MacArthur's remarks seem to make it out to be.—ED.]

TOXIC PSYCHOSES*

Approximately 7.5 percent of all psychoses are of toxic origin, not including cases of syphilis and encephalitis. The toxins of various infections, general and focal, have an effect on the cerebral cortex and produce mental symptoms.

In 36 cases, two of which showed symptoms of dementia precox, infections were found in the kidney in 3; in the teeth in 10; in the tonsils in 7; and in the uterus and ovaries in 6. When these infections were cleared up by treatment, the confusion symptoms disappeared in about 6 weeks; the patients recovered in a few months and have not relapsed.

For best results, the infections should be eradicated as soon as possible after symptoms appear.

JAMES N. BRAWNER, M.D.,
Atlanta, Ga.

FAIRY TALES OF PROCTOLOGY
"A Sure Cure For All Rectal Ailments"

Long, long years ago the alchemists labored to discover or invent an elixir of life—a single remedy for all ills. But times were hard and, what with the wars abroad and the feuds at home, little chance was found to nourish this seedling of science. Hence relentless mortality eventually claimed these seekers after immortality.

It does seem a pity that at least some of these could not have lived to witness the achievement, in part, of what they had labored for in vain. A single remedy for *all* ills is still to be found, but at least the day when it *will* be found cannot be far off when we consider the fact that a single remedy for all ailments of one part of the body *has been found!*

Rectal suppositories — the profession's gift to proctology! Rectal suppositories are now known to be a sure cure for all rectal ailments! It really doesn't matter what the disease is—suppositories will cure it! Be it eczema of the anus or falling of the fundament—the therapeutic answer is a suppository!

*Abstract, by G. B. L., of a paper read before the Southern Medical Association, Nov. 15, 1927.

Piles wither and fistulae no longer weep if a suppository be inserted twice daily into the rectum. Strictures melt and polyps pine away under the potency of this modern elixir of rectal health. The enormous decrease in cases of rectal cancer within the past few years is entirely due to the increasing use of suppositories. Even the necessity of examining and diagnosing the rectal disease is abolished by this wonderful remedy. All one needs is the patient's word that he has piles! With this information the modern medico may swing about in his well oiled swivel chair, order the suppositories and collect a fee, merely for knowing of the existence of this wonderful panacea for all proctologic ills.

J. F. MONTAGUE, M.D., F.A.C.S.,
30 E. 40th St.,
New York, N. Y.

CONSULTATION REQUESTED
Mouth and Throat Infection

The case I am about to report differs from any I have previously seen and I shall welcome the opinions of the readers of CLINICAL MEDICINE AND SURGERY.

Case of M. B., age 12 years.

I was first called Feb. 17. The patient had been slightly ill for four days, had been given some mild, domestic laxative, but had been feeling worse each day. The chief complaint was of sore throat and nervousness.

Examination showed the throat acutely inflamed, resembling follicular tonsillitis. Temperature, 103°F.

Treatment. — Calomel, 1½ grains (100 mgm.), in divided doses, followed, next morning, by magnesium sulphate. After the bowels moved well, sodium salicylate was given in solution.

Feb. 18.—Temperature 102°F.; throat about the same; teeth sensitive. No food was allowed, as even soups caused great pain in the mouth and throat, but plain hot tea was given freely.

Feb. 19.—Temeprature 104°F.; tongue had "strawberry" appearance and the throat looked like those seen in well-developed cases of scarlatina; inflammation of the gums more acute, and extending; no eruption except slight urticarial patches, appearing and fading several times, over the abdomen.

Feb. 20.—Temperature 104°; no eruption; entire mouth and gums intensely inflamed.

Feb. 21.—Temperature 103.5°; throat better; mouth and gums unchanged.

From this time until Feb. 28, the fever and the inflammatory symptoms subsided very gradually. The treatment was entirely symptomatic (aconite, echinacea, milk of magnesia, astringent mouth washes, liquid diet and painting the gums, once daily, with a 2-percent solution of silver nitrate) and appeared not to hasten the progress of the disease.

March 4.—The patient had been free from fever for several days and felt well, but the gums were still somewhat inflamed and two ulcers, about the size of a dime, were present on the roof of the mouth. These ulcers were healing.

In my opinion this was not merely a local condition, but some form of general systemic infection, though what, I do not know. I kept the patient isolated, to prevent possible spreading of the disease.

E. W. REEVES, M.D.,
Bookshire, Texas.

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[Without any laboratory reports at all it is very difficult to suggest a diagnosis. All physicians of today should be prepared to make uranalyses and blood counts, unless a clinical laboratory is readily available. Practically all State Laboratories are ready to make bacteriologic studies of throat smears, though many doctors prefer to study direct smears themselves, in order to save time.

In this case we feel that knowledge of the bacteriologic findings in the mouth and throat was of primary and vital importance. Leukocyte and differential counts would also have been of great interest. We are not informed regarding the pulse and respiration, nor whether lymphatic enlargement and tenderness were marked.

Sometimes the throat symptoms predominate in scarlatina, but we can hardly make a diagnosis of this condition without the presence of the characteristic skin eruption.

This might have been an acute infection with Vincent's organism, or with *Streptococcus hemolyticus, S. viridans* or the pneumococcus—perhaps a combination of several of these. Constitutional symptoms are always present in these infections, and sometimes are very severe. Only the microscope can resolve our doubts in such cases.

In all acute infections like this, not calling for specific serum therapy, we earnestly

recommend intramuscular injections of **nuclein solution**, repeated every 8 to 12 hours (later, 12 to 24 hours), beginning, in a patient of this age, with 5 minims (0.325 cc.), and increasing up to 1 cc., unless the local reactions are severe.

If the pulse was strong and rapid, *aconitine* should have been given, in small and frequently-repeated doses, until it became more normal or physiologic symptoms of aconite sufficiency appeared. Local pain and tenderness might have been relieved by *anesthesin* or by gargling with a hot solution of acetylsalicylic acid. A 1:15,000 or 1:20,000 solution of *metaphen*, in hot isotonic salt solution, is an effective antiseptic in such cases. The silver nitrate solution, applied to the ulcers, might have been used stronger (up to 5 or 10 percent), especially after the first few days, if immediately neutralized with salt solution. The general management of the case was satisfactory.

This case well illustrates the importance of laboratory studies in making accurate diagnoses.

We shall be glad to receive and publish further comments on this interesting case. —ED.]

MEDICAL ADVICE BY RADIO TO VESSELS AT SEA

Since February 4, 1922, the United States Public Health Service has been furnishing medical advice by radio to vessels at sea. The amount of this work has increased and the Public Health Service has often rendered great assistance to vessels at sea in need of medical aid. Advice by radio is furnished from the U. S. Marine Hospitals of the Public Health Service, the Atlantic Coast being served from New York City, the Gulf of Mexico from Key West, New Orleans and Galveston, and the Pacific Coast from San Francisco. On the Great Lakes, the Marine Hospitals at Chicago, Cleveland and the Relief Station at Sault Ste. Marie give medical assistance by radio. The Relief Station of the Public Health Service at Honolulu, serves ships in that vicinity, and those near Manila radio the Relief Station there for advice.

The following example of the messages received and advice given illustrates the value and importance of this service. This message was received from a ship out at sea, at a Marine Hospital at 8:44 A.M.:

"Accident, man fell down hold, apparent injury, bruises, left temple and body, dazed condition, symptoms of concussion, require doctor's advice, if necessary assistance." (Signed) Master of Vessel.

Within twenty minutes the following message had been forwarded in reply:

"Absolute rest in bed ice cap to head, should patient become unconscious later rush to hospital at once, patient can be taken off at quarantine station if necessary." Marine Hospital.

Instances of this kind could be multiplied indefinitely. Frequently a report is given to the hospital from day to day as to the progress of a case. "Patient much improved. Thanks," is a report which is quite frequently received. The variety of cases treated in this way is very great, ranging from toothache to the treatment of fractures of various parts of the body. One vessel sent a frantic appeal for advice as to how to handle a man with delirium tremens.

This medical advice to vessels at sea is greatly appreciated by seafaring men and many letters and radiograms thanking the Public Health Service for the advice given have been received.

The furnishing of such medical advice by radio has been made possible through the generous cooperation of the several radio companies. This service is rendered without cost to the vessel or the hospital.

U. S. PUBLIC HEALTH SERVICE.

THE SELFISH OR SELF-CENTERED CHILD

The "only" child is in a position to become self-centered. This is especially true if this child has been brought up in a crowded section of the city where he is confined to limited quarters with no companionship except that of his mother. He is, to be sure, monarch of all that is within his reach, but his field is far too limited. He has no knowledge nor chance to gain knowledge of the interests and activities of other children.

The same holds true, in a greater or less degree, with a child who, by illness or accident, has been prevented from making early contacts with other children and has had only the companionship of an oversolicitous mother. He, too, becomes impressed with his own importance.

Not infrequently one child in a family is especially favored by one parent or the other, being protected, not from experiences, but from the natural consequences of those experiences. Such children in later life are of the type who fail to recognize superiority

in others and are intolerant and resentful toward authority.

If it so happens that there are no other children in the home, every effort should be made to bring the child into association with children outside, even at the risk of physical dangers in the street and the chance of picking up some of the vocabulary of the alley.

The child should be taught to share his toys and playthings, his candy, books, and pennies with other children. In games he must learn to strive for the good of the group and not for personal achievement. If defeated, he must learn to acknowledge better playing and take it with a smile. Children should learn to play many games with fair ability, rather than to excel in one particular game.

There is a great tendency, not only on the part of the children but on the part of adults as well, to cling to the things they do exceptionally well and retire from the field of activity where they do not excel. Unselfish conduct should always be rewarded by commendations and occasionally by something of a material nature. There is certainly no disadvantage in the child's learning from experience that unselfishness is a paying proposition.

D. A. THOM, M.D.,
Boston, Mass.

A NEW SYNDROME (?)
(Diagnosis and Treatment Under Difficulties)

I have had an epidemic to handle during the past two weeks which, for a time, baffled me to name. In fact, it is not named in any of my textbooks. It is not influenza.

I was taken sick with it March 20, 1928. If I had not been located in a remote rural district I would have gone to the hospital for care, but what would all these people have done if I had left them?

I ceased making calls on the spot, but I gave medicine to all who came or sent for it, and that has kept me busy—more so, in fact, than was good for me. I am living alone with no one to care for me.

The disease manifested itself as follows:

Period of Incubation: One to three days. It is acute, infectious and contagious.

Symptoms: For the first few hours, lassitude is present, with impairment of appetite and a "peculiar feeling" that worries the patient. This is followed by a temperature ranging from 99° to 104°F., for two to three days, as a rule, with headache of moderate severity at the frontoparietal sutures and base of occiput, the first day or two.

Before the first day is over, a cough develops, which is non-productive, very severe, frequent, hard and dry and excruciatingly painful in the subclavicular region, at the lower end of the sternum and in the cartilages of the 8th, 9th and 10th vertebrae, on each side. This cough will disappear, or nearly so, in a couple of days, under proper treatment; a few who have treated themselves are still coughing, after 10 days or more.

Respirations and pulse are speeded up to 25 to 30 and 85 to 110, respectively, in adults. It is also characterized by very stubborn constipation, loss of strength and "pep" and night sweats. About once a day the patient feels like eating, and after eating will have a dull, heavy feeling, with headache and pain, at the lower end of the sternum that sometimes frightens him. In fact, for two or three days, he is *worried* about himself. It is a terrible feeling.

When it starts in a family it gets them all, but it is especially severe in adults of all ages. The disease is very mild in small children—not much different from an ordinary case of coryza.

Upon *physical examination* the tongue is coated, white with a faint ivory tint; no sore throat or tonsil involvement; no glandular enlargement; no lung involvement, aside from moist hard rales and a more or less severe bronchitis. A peculiar feature is the sputum, which does not appear until convalescence begins. It is a round ball of pus, encased in mucous, much like that following an asthmatic attack, but larger.

If the patient will not give heed to it and take very good care of himself, bronchopneumonia is very liable to follow—it did in three of my cases; also, one had lobar pneumonia that came to crisis on the fourth day.

One family that lives a few hundred yards from my office has four persons sick with it. They have been prescribing for themselves. One of them would not confine himself to the house, and tonight after I had started writing this, I was called to see him. It took epinephrin to revive him from a heart attack. He also has broncho-pneumonia. He had been working all day.

Under proper treatment, convalescence will be established on the third or fourth

day, but it will take a week to be safe to go about the usual vocation again.

I tried every known remedy of any worth for influenza, but to no avail. Serums or bacterins have no effect on it, or else I did not give large enough doses. I also tried phylacogens to no avail.

I soon learned that the most satisfactory treatment was large doses of epsom salts, diluted in hot water; guaiacol, creosote and calcidin internally; painting the surface of the chest with tincture of iodine twice a day; and the application of camphor and olive oil, very hot, externally, every 2 hours.

So far, all patients thus treated are doing nicely or are well. The pneumonia patients are all convalescing, except the new ones, and they are doing as well as could be expected. I have not seen any of them since I was taken sick on the 20th, but I have a report from all of them daily.

The night sweats are stopped with atropine, otherwise they last from five to seven days.

There are probably 60 cases around here, but I have not heard of its being anywhere else, as yet.

We have had no rain, snow or changeable weather. This is in an arid or semi-arid country.

This has been a very serious matter, with me personally, and a trying one. I just began convalescing this afternoon, but I am going to care for myself for a few more days. I made this one short call tonight, but it was a case of "life or death"—if I had not gone, there would have been a funeral.

I got through the influenza outbreak with a clear record, and hope I shall do as well with this.

E. J. HAY, M.D.,

Rogers, New Mex.

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[Few physicians in the more thickly settled portions of the country have any clear idea of the conditions under which their professional brothers are working, out on the edge of things, where a man must stand on his own legs—or fall. We therefore are happy to publish this article, not merely as an interesting *clinical* description of an unusual group of cases, but also as a wholly unintended picture of how the lonely doctor, in a remote district, functions.

Rogers, New Mexico, is a hamlet listed, in 1920, as having a population of *twenty-eight* (28) souls, in Roosevelt County. Only two towns in the county have more than 100 population. Portales, the county seat and the *nearest railroad station* (1,150) is 20 miles from Rogers, and Elida (300) is 30 miles away. There is no village at all nearer than 12 or 15 miles.

Dr. Hay is a man 58 years old, and yet he thinks nothing of the arduous labor of caring for his far-scattered clientele. *It is his duty!*

If any of our more softly and advantageously located readers have an inclination to turn up their noses and say, "How can we suggest a diagnosis for these cases without a report of the blood counts, bacteriology, urine findings, blood pressure and various other matters," let them read this again and picture this man, a widower, lying alone in his bed, ill and with no one to minister to him, and yet dispensing the remedies he had found useful in a malady for which he knew no name, to all who came to him for help, and refusing to go to a hospital because, "What would all these people have done if I had left them?"

Not all of the heroes of medicine write books or have marble shafts erected over their graves when they die!

If any of our readers have ideas in connection with these cases, we shall be glad to hear from them.—ED.]

DIAGNOSING HEMORRHOIDS

If one really has hemorrhoids, the fine points in the technic of the examination in order to discover them will be more appreciated.

If a person has piles and has had them for any length of time, one generally finds a contractured sphincter, which is ofen quite spastic. The first thing to do is to relax the tight sphincter to some extent. This is done, with the patient lying on one side and having the knees well flexed, by the physician placing his lubricated thumbs, with tips together, over the anus and pressing up between the nates until the resistance of the external sphincter is felt by the balls of the thumbs. This pressure is kept up for some time with gradually increasing force, the tips of the thumbs forming a wedge. Never let the thumbs slip into the anal canal. With side pressure, first with one thumb and then with the other, a sufficient relaxation can be secured without hurting the patient, no matter how severe his piles are.

Next, the index finger, well lubricated, is inserted into the rectum, having the patient bear down as at stool. The inside is thoroughly palpated, noting the size, shape and consistency of the prostate gland, if it be a male, and, the position and condition of the uterus, if it be a female. Hemorrhoids cannot be palpated in the rectum, so do not expect to find them with the finger. While the finger is in the rectum it is well to stretch the sphincter somewhat more, by pressing sideways, but little can be done in that way, for as you press against one side of the ring the other side follows.

The next step is to insert a speculum; and the most humane speculum on the market, for examination as well as for some forms of treatment, is the Brinkerhoff model. Use the small size the first time and have the patient bear down as when inserting the finger. Be sure to insert the speculum to its full length so as to be well above the linae dentatae. Then have patient relax and slowly withdraw the slide of the speculum, exposing the wall of the rectum and anal canal in the window. If there be piles they will pouch out and fill the speculum. Sometimes a boggy, loose mucous membrane will do the same and is very difficult to differentiate from piles. Papillae, pockets and fissures also may be noted. A good headlight or a lighted speculum is indispensable for diagnosing conditions in the anal canal and rectum.

I am old enough and sufficiently decrepit to be drawing a pension from the government for services in the Spanish American War, and I was rather amused when I went before the doctors for my examination. It is customary to send out a blank with the numerous ailments the applicant for a pension might be suffering from. The applicant generally marks plenty and leaves it up to the examining physicians to find out whether he has them or not; so, among numerous other ailments, I marked piles. When the learned physicians came to that item he said, "Bend over and spread your buttocks with your two hands." I did so and he, standing about six feet away, pronounced the ominous verdict to his secretary, "No piles".

The trusted servants of Uncle Sam are probably no more slack in their diagnostic precedure than is the average physician. In fact, the majority of physicians do not recognize piles unless they become so pendulous and prolapsed as to be turned out through the anal canal and presented as large, red lumps, covered with mucous membrane, between the nates; or they may recognize a thrombotic pile at the anal margin, if it be hard enough and shows blue through the integument.

The exact technic of inserting and withdrawing a speculum, in a sensitive rectum full of hemorrhoids, without hurting the patient in the least, is not within the purview of this article. How any physician can pretend to examine for piles without inserting a speculum is a mystery; yet, there are thousands of them who do not even own a rectal speculum, especially one that could be inserted into the rectum of a patient who has piles, without extreme torture.

After the examination with the small Brinkerhoff speculum, the larger or five-inch instrument should be inserted to its full length, so as to examine further up. While the principal pile-bearing area usually occupies about one inch of space just above the linae dentatae or, as some call it, the muco-cutaneous juncture, yet there are often piles extending up 2½ and 3 inches above that line. Some are high, some are low; some are large, some are small, and they may be all around the rectum, so that it is necessary to withdraw the speculum and insert it again and again, until the entire wall is explored.

On account of the prevalence of piles, I think this little review of the diagnostic procedure is not amiss. I might say, in closing; do not undertake to insert a speculum when the hemorrhoids are prolapsed, but replace them first, which procedure involves a special technic.

DON CABOT MCCOWAN, M.D.,
Chicago, Ill.

The July number of CLINICAL MEDICINE AND SURGERY *will be devoted to* endocrinology, *and the September number to* physical therapy; *also there will be a special* chemotherapy *number before long.*

Send in your Clinical Notes and Practical Suggestions *for these special numbers,* without delay.—ED.

The Leisure Hour

Vacation Tips for Fishermen

MANY of you will choose to camp by lake-land or sea-shore; others to pass outings in the woods or near the ocean. Keen pleasure, renewed health and never-to-be-forgotten memories will be your reward.

Your cares and enemies are left at home. You dream of pine-scented zephyrs or breezes laden with a salty tang. This is pleasant, but have a care! Your foes must be met!

From the last of May, nearly to the first of September, "The Three Musketeers" are on the warpath. You may become well acquainted with this trio, or meet only with mosquitoes and escape midges and the black fly. Can you fight back? Of course, and win the battle, too!

Get a jar of white vaseline and one-half ounce of oil of bay. Scoop out the vaseline into a plate and gradually add and mix with drops of the oil until the odor is quite strong, then replace in the jar and carry it with you. Keep the face, forehead, hands and wrists well smeared with this while out of doors and rub it well about ankles. Don't be finical. The *three* may like *you*, but they hate this delicate perfume. People often are quite ill from the stings of black flies, midges and certain species of mosquitoes. You have your warning, go fill your jars!

Sunburn is not fatal but is quite annoying. Harsh winds produce disagreeable results. Procure and take with you, several tubes of K. Y. Lubricant. Apply freely before and after exposure. Cracked lips, rough hands and hard cuticle respond to this pleasing jelly and it can be removed readily with simple water—no soap is required. Sunex is a fine protection against sunburn.

The lure of fishing may strike your fancy, and if the lures used are right and the fish are struck properly, have no fear about filling the creel. Suggestions given are for those not familiar with this sport; experts will only laugh, but what do you care if you get fish?

Brook Fishing for Trout

You will need a 5½-ounce, split-bamboo rod (a steel rod will do), a good reel, a linen or silk line, a few three-foot leaders, a dozen No. 6 Sproat hooks on gut, a small box of split shot, creel and landing net.

Procure a tin box, jab holes through the cover, fill with good earth, pound up 5 cent's worth of *Lovage Root*, obtained from your druggist, add this to the earth, put in a good supply of fat angle-worms, and there you are!

Smear on the bug stuff. Wear strong shoes. Old clothes are better than a fancy outfit.

Bunch worms on the hook. Fish down stream. In rapid water, fasten two split shot on the leader or on the gut of the hook if the leader is missing. Keep on the side of the stream where your shadow falls back of you. Don't talk or make any noise. Toss bait at foot of rapids, into dark pools, and near sunken logs; work it close to grassy banks where water is fairly deep.

When a strong bite is felt, yank quickly. Play the fish until he is tired out. Let him run if he pulls hard, but reel in and never let the line slacken. Use a net in landing, if the fish is large. Kill it at once by hitting it on the head with a stone or heavy piece of wood.

Build a camp-fire; clean the fish; stick it on a V-shaped, strong and green twig, and toast over hot embers. Sprinkle with salt and pepper and add a bit of butter, if you have it. Eat bones and everything. Oh Boy!

From the first fish, cut a piece from the belly, including the two fins underneath. This makes a mighty good bait. PUT OUT THAT FIRE, when through eating.

Pickerel, small-mouthed black bass, land-locked salmon, large white and yellow perch, pike, lake trout, wall-eyed pike, whitefish, big brook trout, rainbow trout, golden trout, and large-mouthed black bass are the game fishes found in Eastern waters.

All those mentioned in this list can be taken by trolling, and although simple, this is the best method to use for beginners in the art of angling. When you are finished fly casters, you in turn, will laugh at such easy rules. Just now you wish to get fish to eat and without buying expensive tackle.

Fishing for the Pan

Suppose you happen to be near a pond and in a hurry to get a mess for a good meal, try this trick. Hire any sort of boat, no matter if she does leak a bit; tie a long piece of rope securely about a large stone, to serve as an anchor; use the split-bamboo or steel rod, with same reel and line as in brook fishing, or should you not care to risk fishing with them, cut as long and straight poles as you find in the bush growth; tie a piece of line, about the same length as the branch you have shaped, at one end; attach a small sinker above the hook, and this make-shift will answer well enough. Plenty of angle-worms will be needed.

Row or push the boat into deeper water; throw over the anchor—near lily-pads, but not among them, is a good ground. Cover the point of the hook well with the worm, then bunch it a little. Strike fairly hard at every nibble. Sunfish, bullheads or horned pout, small yellow perch, often decent pickerel, dace, an eel if the bait goes to the bottom, should reward your efforts. All are good eating.

Horned pout are ground feeders and generally bite better at night or on dark days. They suck baits slowly, then swallow the hook. Yank at the slightest nibble. Look out for the three sharp horns or fins, for these fellows can inflict nasty scratches. Pout are not handsome but make wonderful chowders and, when fried or broiled, are delicate morsels.

Tie cotton waste and worms into a ball and place a medium sinker at the end of the line with the ball about eight inches above. Feeling many tugs, pull in slowly. When near the surface, slip a net under and lift the fish into the boat and empty them into a bag or box. This saves your being horned, as no hooks are needed. Pieces of fish make good baits. File off the barbs and the hooks can be more easily removed, or purchase hooks made especially for bullheads.

Sunfish are pretty and are excellent panfish. Try them.

Trolling in Fresh Waters

A steel rod or short, three-jointed, split-bamboo rod; strong, double-twisted gut leader, well swivelled; hooks having spoons attached, or bright flies with silvered spoons; Archer spinners with single hook; Dare-Devils; artificial minnows; a bottle of V-shaped strips of pork rind; a few strips of red flannel and white cloth; a small box of worms, and you have enough tackle to start with.

Get your outfit at a good sporting shop and the salesman will help you to select. You can choose lures from the 279,999 offered, but accept only *single hook* devices. Better sport, better sportsmen!

Move the boat very *slowly*. Keep near lily-pads, beds of tall grass, ledges of rock, mouths of brooks, spaces of open water, and where you think fish are in hiding. Once clear of the landing spot, pay out slowly about 25 feet of line—if the water is smooth, more can be used.

Strike rather hard. When the fish is securely struck, have the boatman get into open water quickly, where you have a chance to play the fish properly. Keep the tip of the rod well up and let him run! Reel in slack and always keep the line taut. *Never hurry! Never holler!* Tire that fish out before attempting to net, gaff or lift him from the water!

Small-mouthed black bass are fine fighters and so are landlocked salmon. Lake trout or togue require a big spoon, a live minnow of decent size, a rather heavy sinker and lots of line. They are found in deep water, off ledges. Strike hard! They rush, go to bottom, grunt, rush again and keep up this sort of thing. They are fine eating, broiled, baked, planked or fried. It won't take long to get the hang of trolling and learn just how to handle every fish taken by this method.

Camp Cookery

Learn all you can about camp cookery. Each in turn will become chef for a day. It will be helpful to take along a good, strong broiler and and a planking board, made of hard wood, with a support on the back. Have these large enough for a good-sized fish, split open. Chickens, large steaks, ducklings, large chops and other meats should be cooked in this way. Long wire nails are necessary to hold things close to the plank; also a long-handled spoon for basting.

Planking: Build a big fire, hunter's style, and let it burn to glowing ashes. Fasten

your fish to the plank and rub in salt, black pepper and paprika; on each nail stick a hunk of butter. Place the board near the fire, with its lower end resting in a cake pan. Attach the long spoon to a long handle made of a green branch. Stand at one side and baste often, as the butter melts. When slightly browned the thing is done! Serve from the board to plates. Awfully hot work, but worth the trouble! Bake potatoes in the embers. Remember PUT THAT FIRE OUT WHEN THROUGH. Stamp out cigarettes, cigars and ashes from pipes unless they can be chucked into the lake or ocean.

Salt Water Fishing

Salt water fishing is done from anchored boats, with hand lines, large hooks and heavy sinkers. Baits of clams, fish, seaworms, mussels, periwinkles, shrimp, pieces of crabs and lobster are good. Salt water perch, codfish, pollack, hake, flounders, fluke, tomcod, frost-fish, weakfish, mackerel, Spanish mackerel, sculpins and sea-robins are a few of the fish thus taken.

Trolling from small sail-boats, big bluefish, mackerel, weakfish, large pollack, may be caught.

Fishing with a long bamboo pole, from a boat, wharf or bridge, with baits of shrimp, seaworms, small live minnows, good catches of smelt, baby blues and sometimes small mackerel are possible.

Tautog, wrongly called blackfish, may be taken with hand lines, in rips or fast flowing water; better with long poles, off ledges; best with rod and reel, near rocky shores. Fiddler-crabs, lobsters, head and necks of soft clams are fine baits. Tautog fight well. Dig soft clams at low tide; rake quohogs; gather mussels and fiddlers—also rockweed for the clambake—when the tide is out.

This list is long enough to supply plenty of food. In Southern seas, varieties of fish run well into the hundreds. Read up in books on fishing. Get pointers from friends who know the game. Guides, old sea-salts, natives and urchins can teach one a lot.

Crabs

A piece of line or strong string, a sinker, and a chunk of "smelly" fish or meat does the trick. Keep the big ones only. Use one of the modern, self closing traps, if you like.

Clambake

Select a place well beyond high-water mark, smooth it and make a rather large circle of smooth stones, filling in the chinks with pebbles. Build a large fire (have plenty of drift-wood at hand) and keep it burning for two hours. Brush off the hot embers; place the clams in the center; cover with *rock-weed;* pile on corn in the husks, lobsters, chicken cut in pieces and wrapped in wet brown paper or sausages treated in the same fashion, eggs stuck in between, potatoes, well washed with the skins left on; add more rock-weed.

Fasten all in place with a large piece of bagging or burlap and hold down the corners and edges with heavy rocks. Go away and play for *two hours* while things steam. Come back, uncover, serve and eat. A sailor's dream of home! Beer if obtainable; if not, cold Coca-Cola, ginger ale, root beer, mineral water, home-brew, or anything that refreshes. PUT OUT THE FIRE!

Hot Sands

Build a fire and keep it hot. Scoop out a hole. Clean fish and rub in condiments. Jab in a piece of butter and fold together. Tie a string around it and wrap in wet, thick paper; then rock-weed. Put them into the hole and cover with dry sand. Make a fire on top and keep it going for about an hour. Scrape off; remove sand; pull out the fish in a bundle, unwrap and serve on paper plates. Cheap forks and knives will do. Drinks up to you. SOME FISH!

White Bait

Use a long, narrow net. With the incoming tide, wade out with one end and circle; draw; spill the fish into a pail; rinse in salt water; dry in towel; fry in hot fat until the fry turn tails toward the sky; remove with a perforated spoon; serve with thin slices of brown bread. Flasks! Music by the wavelets!

Sorry I can't write a book of hints and ways. This is an article. It will, I hope, give you a start in the right direction. If any of you get mixed or don't understand fully, write the editor of CLINICAL MEDICINE AND SURGERY, North Chicago, Ill. He will inform me and I'll do all I can to straighten out matters through him. Angels can do no more!

KO-LE-LE-MOOK! (translated from the Indian language, means GOOD LUCK TO YOU IN WHATEVER YOU UNDERTAKE!)

FRANK MACKIE JOHNSON, M.D.,
Freeport, N. Y.,
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DEADLY VERACITY

Theophilus Brown is a virtuous youth—
One virtue, at least, is all his—
He never tells aught but the absolute truth,
No matter how painful it is.
When silence, or even a tiny, white lie,
Is called for as tactful and kind,
He blurts out the truth that weighs down on what I
Believe he mistakes for his mind.

"Don't you think I look better?" a sick man will say,
Who needs but a few words of cheer;
But Theophilus Brown is compelled to say nay
By the virtue he holds as so dear.
When a woman would have him admire a new hat,
He tells her it's ugly as sin;
In their presence he always calls plump women fat,
And slim ones he speaks of as thin.

I would root for Theophilus Brown, if I could—
I would call him a wonder, a wiz,
If I thought that he ever had done any good
With that truth-telling passion of his;
But I know he's a mischievous brute and a bore,
And I'll make this prediction, forsooth—
When Hades shall ask what he's prisoned there for,
You may answer, "For telling the truth!"

—Ted Robinson, in the *Cleveland Plain Dealer*.

AN UNUSUAL DISH

The applicant for cook was untidy and insolent in appearance.

"Don't hire her," whispered Jones to his wife; "I don't like her looks."

"But," remonstrated his wife, "just consider the reputation for cooking she bears."

"That doesn't matter," said Jones testily; "we don't want any she-bears cooked; we don't like them."—*Ladies Home Journal.*

He: "May I see you a moment before you retire?"

Hostess: "Well, hardly."—*Northern Baptist.*

A LIFE SAVER

A Chinaman was asked if there were good doctors in China.

"Good doctors!" he exclaimed. "China have best doctors in world. Hang Chang one good doctor; he gleat; save life, to me."

"You don't say so! How so?"

"Me velly bad," he said. "Me calle Doctor Han Kon. Give some medicine. Get velly, velly ill. Me calle Doctor San Sing. Give more medicine. Me glow worse—go die. Blimebly calle Doctor Hang Chang. He got no time; no come. Save life."—*Pharmacal Advance.*

BAD DREAMS

Doctor (examining life-insurance prospect): "Do you ever talk in your sleep?"

Prospect: "No, but I often talk in other people's sleep."

Doctor: "But how can that be?"

Prospect: "I'm a college professor."—*College Humor.*

A VOCAL HAZARD

A minister smote at a tee
And threw his best club in a tree,
Saying, "Fie!, My!, Oh, dear!
I must give up, I fear,
Either golf or the ministeree."

FAWNCY THAT NOW

"You say your ancestors were all killed in the War of the Roses, Miss Fitzjones?"

"O, yes. Indeed, for several generations the family was extinct!"—*Passing Show.*

STUCK!

The respondent was being examined in lunacy proceedings.

"Who was our first president?"

"Washington."

"Correct. Who was our second president?"

"John Adams."

"Correct."

Then there was a pause.

"He's doing well," whispered a friend to the lawyer. "Why don't you keep on?"

"I ain't sure who was the third president myself."—*Patchwork.*

Diagnostic Pointers

AMIDOPYRINE TEST FOR OCCULT BLOOD

Blood may be detected to the extent of one part in 60,000 by adding one drop of a dilute solution of blood to a mixture of 3 cc. of a 5-percent solution of amidopyrine in 96-percent alcohol, with 8 drops each of 50-percent acetic acid and 3-percent hydrogen peroxide. A violet color develops after one minute. The method was tested for minute traces of blood in feces.—M. ELZAS and L. M. LANSBERG, in *Phar. Weekblad.* 64: 19-22, 1927.

FUNCTIONAL AND ORGANIC NERVOUS DISEASES

An organic nerve lesion presents a definite and clear-cut group of symptoms whereby it may be recognized.

Functional disorders may simulate almost any organic condition very closely, but there is always some one or more symptoms missing from the complete clinical picture.—DR. MEYER SOLOMON, of Chicago.

ARTHRITIS AND INFECTION OF THE UTERINE CERVIX

There is abundant clinical and some experimental evidence pointing to a definite relation between infection of the uterine cervix and chronic arthritis.—DRS. CHAS. MAZER AND M. SABEL, in *M. J. & Record*, Jan. 4, 1928.

THERE ARE NO "FAIRLY GOOD" NEUROLOGISTS

We sometimes encounter fairly good internists and reasonably competent otolaryngologists; but a neurologist either *knows* his business or he *does not*—there is no middle ground.

Practitioners should be able to decide whether or not a patient has a nerve lesion which requires neurologic consultation, and if he finds such a condition he should call an *expert*.—DR. FRANK NOVAK, JR., of Chicago.

ENURESIS NOCTURNA

Enuresis is really only a symptom and not a disease entity; it is usually a functional disturbance, the psychologic causes of which may vary considerably in different instances. Consequently, in order to obtain successful results, each case requires individual analysis. The approach that cures one child may aggravate the condition in another. Bad methods of treatment, such as punishment or fright, may occasionally temporarily succeed but incidentally may seriously harm other personality traits.—DR. J. K. CALVIN, in *J.A.M.A.*, March 17, 1928.

RECURRENCE OF KIDNEY CANCER

If recurrence of a malignant renal growth does not take place within two years after removal of the tumor, it is quite likely that the patient will have none. —*Urol. & Cutan. Rev.*, Oct., 1927.

CAUSES OF INSOMNIA

Among the many causes of insomnia may be mentioned: sudden changes in atmospheric pressure; insufficient food; low blood pressure; anything which disturbs the distribution of blood; and anything which engages the senses, especially those of hearing and touch.—DR. E. M. CALLENDER, in *Lancet*, Dec. 17, 1927.

PAIN IN THE BACK

It is necessary for any practitioner to be able to differentiate between a gastric ulcer, giving pain in the back, and the gastric crises of tabes; or between the rectal pain of a tumor of the cauda equina, from hemorrhoids or from malignant rectal disease.

The use of a percussion hammer, the elicitation of the Babinski reflex and the use of a pin for a few minutes should indicate the presence or absence of involvement of the central nervous system.—DR. HENRY A. RILEY, in *J.A.M.A.*, Feb. 11, 1928.

CANCER OF THE UTERUS

Early diagnosis of carcinoma is essentially based on microscopic evidence. The causes of leukorrhea and bleeding should always be determined. Free bleeding after local manipulation of the vaginal portion of cervix, cervical canal or uterine cavity should always lead to most careful examination to rule out malignancy. Diagnosis

must be corroborated by microscopic evidence. Periodic health examinations in deflorated women, and, if symptoms of leukorrhea and bleeding are present, in nondeflorated women, should include an examination of the genital organs.

Prognosis of carcinoma depends on: (a) the extent of the tumor; and (b) on the histologic degree of malignancy. A fixed tumor is hopeless from the standpoint of any treatment. A histologic malignancy-index of 30 or more also means a carcinoma of such high degree of malignancy that treatment is probably hopeless.—DR. HENRY SCHMITZ, in *Bul. Chicago M.S.*, Jan. 21, 1928.

CONSTIPATION IN APPENDICITIS

In adults, appendicitis is always associated with constipation, and the absence of this symptom calls for a search for other conditions.—DR. ALVIN W. LA FORGE, Chicago.

SURGICAL PREPAREDNESS

In every appendectomy, be prepared to do an intestinal resection.

In every curettage, be prepared to do a laparotomy.—DR. MAX THOREK, Chicago.

EPITHELIOMAS

Roughly speaking, an epithelioma occurring above a line drawn from the corner of the mouth to the pinna of the ear is probably of the basal cell type and relatively benign; while those about the lower lip are generally of the more malignant, squamous or prickle cell variety. Basal cell epithelioma destroys tissue early and metastasizes late.—DR. CHAS. E. COOK, in *J. Maine. Med. Assn.*, Nov. 1927.

ROENTGENOGRAMS OF NASAL SINUSES

No worth-while information can be obtained by x-ray examination of the nasal accessory sinuses of children. The clinical findings rarely agree with the roentgenograms.—DR. BURTON HASELTINE, Chicago.

HYSTERIA

Hysteria is not a clinical syndrome. It is an abnormal way of reacting to certain life situations—a childhood reaction to an adult situation.—DR. ISADOR H. CORIAT, in *Bost. M. & S. J.*, Dec. 22, 1927.

PYELITIS AND FOCAL INFECTION

An unexplained pyelitis cannot be expected to get well as long as the patient harbors closed abscesses at the roots of his teeth or in his tonsils.—*Urol. & Cutan. Rev.*

PREVALENCE OF AMEBIASIS

Out of 500 cases of amebic dysentery diagnosed at a well known clinic, more than 70 percent came from Canada and our Northern States.

There are those who feel that 10 percent of the population of the United States is infected with amebas and they should be looked for in every case of vague gastro-intestinal disorders.

DUODENOSPASM

Duodenal spasm, without organic lesion, is a rather frequent occurrence and causes symptoms such as pain, distress and vomiting. It accounts for the "puddling" which is not infrequently observed under the fluoroscope. In rare cases, when the spasm is particularly severe, antiperistalsis is seen. Under treatment by rest, belladonna and sedatives, both the symptoms and the roentgenologic phenomena disappear.—DR. MARKS S. SHAINE, New York, in *M. J. & Record*, Oct. 5, 1927.

ACUTE ABDOMINAL PAIN

There are two kinds of acute abdominal pain:

1.—Patient rolls, writhes and squirms, trying to get in a comfortable position—colic, that is, cholecystitis.

2.—Patient draws thighs up and remains perfectly quiet—appendicitis, because of peritoneal irritation.—DR. JOHN W. SHUMAN, Los Angeles, in *M. J. & Record*, Oct. 5, 1927.

Current Medical Literature

NEW GONORRHEA TREATMENT

In his treatment of acute gonorrhea in the male, as described by Dr. F. H. Redewill, in *Am. J. Physical Therap.*, Oct., 1927, diathermy, combined with urethral injections of mercurochrome in gelatin, are used. The mixture is made as follows: 100 Gm. of c.p. granulated gelatin is dissolved overnight in 200 cc. of distilled water. In the morning this jelly is heated over a water bath, diluted to 1 liter and enough mercurochrome added to make a one-half to five-percent solution, the strength depending on the stage of the treatment. This mixture is heated to 140°F. and allowed to cool to 105°F.

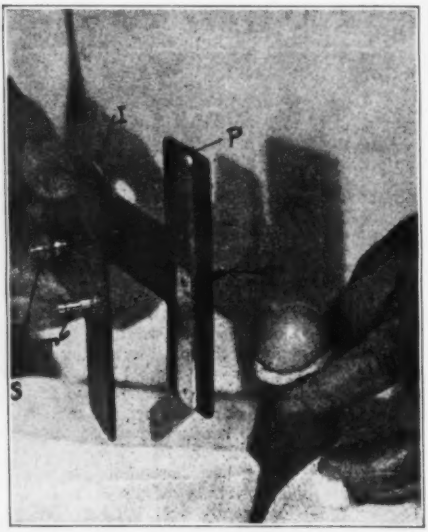


Fig. 1.—New penis clamp electrode. (P) Positive pole. (I) Indifferent pole. (T and T') are electric terminals attached to clamp. (S) Screw to hold both blades of electrode (P and I) firmly clamped to penis. The two electrode blades (P and I) are parallel, thus insuring the same amount of heat for the entire length of the blade. The metal on the positive side (P) is considerably narrower than on the indifferent blade (I).

The mercurochrome-gelatin solution is injected into the urethra and the glans penis covered with a condom, fixed in place with a rubber band to hold the solution in the urethra. A thermometer pierces the condom and passes into the urethra.

Diathermy is applied from the outside by the author's special clamp electrode, attached to the penis so that the narrower metal electrode comes in contact with the ventral surface and the larger metal electrode with the dorsal surface. The penis, as well as the urethral solution, receives considerably more heat when mercurochrome is made up with gelatin than when made up in an aqueous solution. A temperature of 110 to 115°F. is easily reached and is measured by the thermometer.

Fig. 2.—Penis clamp electrode in position and connected by terminals to the diathermy machine.

The treatment is painless and the gonococcus quickly disappears from the discharge. Patients are given one or two treatments a day and these must be continued until the urine is clear and the gonococcus is absent following the silver and sound test.

In chronic gonorrhea the antiseptic-gelatin solution is injected into the bladder.

GWATHMEY'S SYNERGISTIC ANALGESIA IN OBSTETRICS

Dr. I. H. Noyes, Providence, R. I., in *Anesthesia and Analgesia*, Dec., 1927, after 3 years' experience of the Gwathmey-Davis method of synergistic analgesia, by means of intramuscular injections of magnesium sulphate solution and morphine, plus the rectal instillations recommended by the authors, considers the method a very valuable addition to the armamentarium of the obstetrician. Its most important features are safety and simplicity of technic.

The technic followed by the author was as follows: A soapsuds enema on admission, if in labor; an intramuscular injection of 2 cc. of 50-percent magnesium sulphate, with morphine gr. ¼ (.0016 Gm.) when the patient begins to complain and there are strong contractions; a second injection of mag-

nesium sulphate, without morphine, one half hour after the first.

The rectal instillation is not given until contractions are strong, about 20 to 30 minutes after the second injection. It contains quinine (alkaloid), 20 gr. (1.3 Gm.); alcohol, 45 minims (2.80 cc.); ether, 2½ ounces (74.2 cc.); and either petrolatum or olive oil to make 4 ounces (118.4 cc.)

The most satisfactory results will occur in primiparae whose labors progress normally to spontaneous termination, and where the treatment is so timed that delivery takes place within 2 or 3 hours after administering the rectal instillation.

Despite its apparent safety, the technic is not one to be used with careless indifference. Knowledge of the existing conditions is essential in choosing the time of the first injection, and again when the rectal instillation is given. Afterwards the patient must be under constant observation.

Success depends upon strict attention to what seem trivial details.

SOLAR RADIATION AND RICKETS

Under the term "skyshine," Drs. F. F. Tisdall and A. Brown, of Toronto, in *Am. J. Dis. Child.*, Nov., 1927, treat of the sun's rays that are reflected from the sky and clouds, in contradistinction to the rays received directly from the sun itself.

From experiments on rats, these authors conclude that the antirachitic effect of skyshine is approximately from one-half to two-thirds as great as that produced by what is ordinarily termed sunshine (rays from the sun, plus the reflected rays from the sky).

In the same journal the same authors contribute an article dealing with the antirachitic value of the sun's rays through various special window glasses, this investigation being also made on rats.

It was found that the antirachitic effect of the sun's rays (including skyshine) through vitaglass, vioray glass and Corning's special glass is from 25 to 50 percent of the antirachitic effect obtained without the use of glass.

No antirachitic effect (or at least extremely little) is produced by the sun's rays through ordinary glass.

The antirachitic effect of skyshine through special glass is almost negligible. To be beneficial the rays through an open window or a window glazed with any kind of glass must be received direct from the sun, and the use of special glass during the winter months is of little value.

DIATHERMY ASSOCIATED WITH NOSE AND THROAT OPERATIONS

In *Med. Rev. of Reviews*, Nov., 1927, Dr. John McCoy mentions the following examples of cases in which diathermy by high-frequency current was of special value: in treatment of polypi after surgical correction of ethmoiditis and sphenoiditis; in keeping drainage opening patent in sphenoid infections; in destroying a naso-pharyngeal fibroma; in the removal of the tonsils of bleeders.

One case of cancer of the vocal cord was treated by coagulation diathermy and desiccation of the growth.

AIR INJECTION IN TABES

In the specific treatment of tabes, the difficulty of medicaments introduced into the blood stream reaching the cerebrospinal fluid is well known. Even repeated lumbar punctures have not given results.

In *Mediz. Klinik.*, Oct. 21, 1927, Drs. S. Kissoczy and A. Woldrich report their results by the provocation of an aseptic meningitis through air injections into the cerebrospinal fluid, following Dandy's technic for ventriculography.

The patient being seated, punctures are made between the third and fourth lumbar vertebrae. About 10 cc. of fluid are withdrawn and 5 cc. of air injected. Evacuations of 5 cc. of fluid and injections of 5 cc. of air are repeated until 20 to 30 cc. of fluid are extracted and 15 to 25 cc. of air injected.

The patient then lies down and, an hour later, 0.30 to 0.45 Gm. of arsphenamine are injected and this procedure is repeated every fourth day for 5 to 7 times.

Of 15 patients thus treated, 10 have shown diminution of the intense pains and gastric crises. Two ataxic patients have been so functionally improved that one has resumed his occupation.

PSYCHIC FACTORS IN ORGANIC DISEASE

That emotional stress can affect us physically, either in health or disease, is the theme of an article by Dr. P. E. Morhardt, in *La Presse méd.*, Paris, Feb. 29 1928.

Emotion can be expressed physically by external signs—pallor, blushing, trembling, etc. But the internal signs are more important; namely, acceleration of the pulse, elevation of cerebrospinal fluid pressure and arterial blood pressure, as well as chemical changes in the body fluids, such as an excess of adrenalin in the blood. In hysteria the serum calcium content is changed.

Emotions can affect the muscles and glands of the digestive tract and cause diarrhea and constipation, as well as a change in the chemical composition of digestive juices. Such facts have been proved in hypnotized subjects. Pavlov's experiments on animals, along the same line, are well known.

Emotions can accentuate or even cause cardiospasm, and cases of purely functional intestinal obstruction are known, for which the only apparent cause was psychic shock.

It is also known that the functioning of the liver is closely associated with mental

states; there are many investigations to prove that the circulatory apparatus also can be influenced by emotional states. Emotion can cause a cerebral hemorrhage, by excess of tension in an altered artery.

The patient's fear before anesthesia or a surgical operation is often a factor in syncope.

Emotional dreams can cause a great rise in blood pressure. Anguish in a patient with a perfectly healthy heart may cause dyspnea, pain in the precordial region and an increase of blood pressure.

Organic diseases of the brain are not, as a general rule, augmented by psychic phenomena.

There is much reason to believe that psychism, owing to its metabolic effects, is a strong factor in diabetes.

It is possible that the nervous and psychic strain of the present day, especially in America, may be responsible for an increase of many metabolic and other diseases which can be directly influenced by emotion.

GALVANOTHERAPY FOR PAIN

Dr. E. P. Cumberbatch, of London, Eng., reports, in *Am. J. Phys. Therap.*, for April, 1927, that in electroionization he uses much stronger currents than those ordinarily recommended—up to 50 or 100 milliamperes. This is especially useful in short, straight wound sinuses and in non-gonococcal endometritis.

For the painful spasms of *Raynaud's disease*, the negative pole is applied over the cervical enlargement and the hands and forearms are immersed in water to which the positive pole is attached. The current is gradually increased to 25 milliamperes.

In neuralgias showing a tender point, the point is anesthetized locally and a needle connected with the negative pole is inserted. A current up to 5 ma. is used for 5-minute periods.

THE ASTHMA PROBLEM

Apropos the formation of a British Asthma Research Council, with headquarters in London, Dr. D. W. Myers, Ann Arbor, Mich., in *Eye, Ear, Nose and Throat Monthly*, March, 1928, dwells upon the work of Adam, of Glasgow, Scotland, and Haseltine, of Chicago, which shows that asthma is curable and that it is only a symptom resulting from two factors—a toxemia and a lesion in the respiratory tract.

In the treatment of asthma, two things must be done, either of which may relieve but both of which will be required for cure: detoxication and removal of irritation from the ethmoid area or areas.

Dr. Myers emphasizes the necessity for internist and rhinologist working in the closest accord. Detoxication must be thorough and complete; intranasal attention must be intelligent and skillful and fit the needs of the individual case; intranasal treatment will be as often non-surgical as surgical; and the fact that intranasal surgery has been done without relief does not preclude the possibility that ethmoid disease is still a definite factor in the case.

The necessity for less selfishness and greater cooperation among scientists and clinicians working on the asthma problem is also stressed.

SOME "DON'TS" FOR EAR, NOSE AND THROAT SURGEONS

1.—Do not use the carbolic-menthol mixture to relieve pain, except in otitis externa.

2.—Cases of furunculosis of the external canal should not be irrigated.

3.—Don't be in too great a hurry to open inflamed drums, especially in children.

4.—Wax should be *washed* out of the canal, not dug out.

5.—The turbinate ought not to be sacrificed too readily.

6—Do not figure on relieving obstructed nasal breathing by a septum operation.

7.—Only *diseased* tonsils should be removed.

8.—The transillumination test is often misleading in sinus diagnosis.

9.—Radical sinus operations are rarely necessary.

10.—Avoid instrumentation in laryngeal affections.

These suggestions represent the results of many years of close observation.—DR. L. H. SCHWARTZ, New York, in *Eye, Ear, Nose and Throat Monthly*, March, 1928.

ULTRAVIOLET IN RICKETS OF THE NEGRO

The impression prevails that light therapy is ineffective in the treatment of rickets in negroes, on account of pigmentation.

In *Am. J. Dis. Child.*, Dec., 1927, Dr. S. A. Levinsohn, of Paterson, N. J., reports the case of a negro infant with an advanced case of rickets who was treated by ultraviolet irradiations. Treatment (mercury vapor quartz lamp) was started with three minutes of exposure at a distance of 30 inches, the time being increased one minute daily up to fifteen minutes. Healing began in 3 weeks and the child was cured in 6 weeks.

HELIOTHERAPY IN MENTAL DISEASE

Drs. J. A. Jackson and L. R. Chamberlain, of Danville, Pa., in *M. J. & Record*, Dec. 27, 1927, record their experience in the cases of 44 patients with various psychoses in which heliotherapy was tried. The period of treatment ranged from a few days to a month. Seventy-five percent of the patients showed a very favorable reaction, including enjoyment, cooperation, quietude, rest, poise and tranquility. A few patients showed signs of metabolic reactions.

The authors consider that heliotherapy is useful in the treatment of mental patients, and that it is worth recommending to all institutions treating such patients.

POLLEN DESENSITIZATION, BY MOUTH

From experiments on himself, Dr. J. H. Black, Dallas, Tex., in *J. Lab. & Clin. Med.*, Sept., 1927, concludes that the oral administration of pollen extracts to a sensitive individual is apparently devoid of danger and causes no unpleasant symptoms.

It seems justifiable to conclude that the oral administration of pollen extract offers a satisfactory means of securing protection against pollen.

One hundred and fifty cases of pollen asthma and hay-fever have since been treated by this method, with gratifying results.

The extract used in the author's own case was a 5-percent glycerine-Coca solution of giant ragweed. The initial dose was 0.1 cc. of the 5-percent extract, diluted with approximately 200 cc. of water and taken fasting. The dose was gradually increased until 1 cc. was reached. Doses were taken three times daily. The maximum dose was 2.5 cc., which gave a total of 7.5 cc. in 24 hours.

SYMPATHETIC PARALYSIS

From investigations by Dr. I. I. Yakovleva and associates, published in *Arch. Neurol. and Psychiat.*, Feb. 28, 1928, it appears that in paraplegia the blood in the pathologic area has physicochemical properties different from those of the blood in the upper part of the body. In a normally healthy person the blood pressure, the type of capillaries, the viscosity, the clotting and the blood sugar, were equal in the arm and in the leg—there was complete isotonia.

In a case of a transverse injury of the spinal cord, definite changes were noted. In the somatic sphere this patient had a paraplegia; in the sympathetic sphere he had a parahypertonia, a parahyperglycemia, etc. The distribution of the symptoms was correspodingly similar.

ULTRAVIOLET THERAPY OF TUBERCULOSIS

In *Colorado Med.*, Feb., 1927, Dr. F. A. Forney reports upon 65 cases of pulmonary tuberculosis treated by ultraviolet rays.

All of the 65 patients were in either the moderately advanced or far advanced class; approximately 30 were bed patients; all were unsuited for heliotherapy on account of their clinical condition; they were of the proliferative type or a tendency to fibrosis predominated, with low grade fever or afebrile.

In 46 far advanced cases, the amount of exposure varied from 15 to about 150 hours. In 3 patients the disease was apparently arrested; 20 became quiescent; 11 were improved and 12 unimproved.

In 19 moderately advanced cases, with from 15 up to 100 hours' exposure, 3 patients showed apparent arrest and 15 became quiescent; 1 was unimproved.

From the experience gained the author feels that patients should not be irradiated with ultraviolet rays until after complete examination to determine the exact conditiors. If the patient's state is favorable for irradiation it should be commenced only under medical supervision, and not then if very much exercise is necessary to take the treatments. Positive sputum, small hemorrhages or cavitation are not contraindications to ultraviolet therapy. Hemorrhages that produce extension of tuberculosis and massive exudates are contraindications.

The ultraviolet treatments can be given long before the same cases could tolerate heliotherapy.

VACCINE THERAPY

In a discussion of treatment with bacterial vaccines, in *M.J. & Rec.* for Feb. 15, 1928, Dr. B. A. Thomas, of Philadelphia, comes to these conclusions:

1.—In the competent employment of bacterins or vaccines and tuberculin, we have one of the most valuable assets in surgery as well as medicine.

2.—Bacterin therapy is merely a link, but a strong and underrated one, in the chain of therapy surrounding many surgical infections and suppurations.

3.—Autogenous bacterial inoculations should be employed more extensively than is commonly the practice today.

4.—Greater consideration should be given by pharmaceutical firms in the preparation of polyvalent stock vaccines, in order to improve their antigenic properties.

5.—More research on the part of immunologists should be stimuated to elaborate improved and more effective bacterins or vaccines.

BACTERIOPHAGE IN FURUNCULOSIS

Early efforts in the use of the bacteriophage as a therapeutic agent were largely confined to those diseases in which the lytic principle could be brought into direct contact with the bacteria.

Dr. N. W. Larkum, of the Michigan Dept. of Health, in *J. Michigan M. Soc.*, Feb., 1928, states that the Department is now supplying bacteriophage free to physicians, and its use is advocated, for staphylococcic infections especially, instead of staphylococcic vaccine.

Bacteriophage treatment has been given in 66 cases of furunculosis, with favorable results in 65. In all but a few cases there have been no recurrences of lesions during a reasonable period of time. Such recurrences as have been reported have been slight or have yielded to a second treatment. The nature of the infecting organ-

ism, with regard to its susceptibility to bacteriophagy, is not significant.

The treatment consisted of subcutaneous injections, on two successive days, of 2.00 cc. of the lysed filtrates containing the bacteriophage. No further injections were required, in most cases. Reactions have been absent or slight.

DIATHERMY AND "STATIC WAVE" FOR FOOT AND ANKLE SPRAINS

Ten cases of foot and ankle sprains treated by diathermy with excellent results are reported by Dr. F. T. Woodbury in *Med. Rev. of Reviews*, Nov., 1927. The "static wave" (interrupted condenser discharge from an electrostatic machine) was also used in these cases, for 30 minutes, following 30 minutes of diathermy.

The patient is insulated on the platform and an electrode applied to the treatment area. The electrode is then connected with the positive side of the condenser and the negative side of the condenser is grounded. After starting the machine, the prime conductors are gradually separated, to the patient's point of tolerance, while the frequency of the sparks is governed by the rheostat of the motor. Only a few treatments are generally required for sprains.

THE FAMILY DOCTOR AND OTORRHEA

If the family doctor wishes to treat otorrhea he should provide himself with an electric otoscope and learn its use. Also a proper ear syringe should be added. For syringing, the water should have a temperature of 101°F.

There is no better remedy for ordinary otorrhea than the instillation of ether, after the ear has been cleaned and dried. The instillation of 2-percent mercurochrome, after syringing or after ether, is decidedly beneficial. If some astringent action be desired, a 5-percent solution in 50-percent alcohol is effective. If there is a large perforation, iodized boric acid, insufflated, will tend to dry the cavity.

Opening up the eustachian tubes with a Politzer bag is a simple procedure that can be learned in a few minutes and ought to be a part of the routine treatment. If the hearing is improved thereby the procedure should be carried out every other day until no more improvement is manifest.—DR. GEO. B. MCAULIFFE, New York, in *M.J. & Record*, Feb. 1, 1928.

WHEN IS A MAN DRUNK?

In *Practitioner* (Lond.), March, 1928, Sir Jas. Purves-Stewart takes up the consideration of the question of deciding alcoholic drunkenness. He gives the following definition: "A drunk person is one who has taken alcohol in sufficient quantity to poison his central nervous system, producing a temporary disorder of his faculties so as to render him unable to execute the occupation on which he was engaged at the time, thereby causing danger to himself and others."

When a practitioner is called to see a comatose patient the following is a summary of the procedure suitable for adoption:

First, inquire into the history of the patient's previous health, whether he has recently had a head injury, and under what circumstances he was discovered unconscious; next, examine the patient for signs of injury, smell his breath, examine his pupils, examine his heart and note the character and frequency of the pulse and respirations; note the radial systolic blood pressure; observe whether the face is symmetric or not and whether there is conjugate deviation of the head and eyes in any direction; the optic disks and fundi should be examined in all cases of coma or stupor; lift the limbs in turn and let them fall, observing whether there is any difference between the flaccidity of the two sides; test the knee and ankle jerks and the plantar and abdominal reflexes on both sides; pass a catheter, note the specific gravity of the urine and test it for albumin, sugar and acetone; finally, note the temperature in both axillae and, in all doubtful cases, perform a lumbar or cisternal puncture and examine the cerebrospinal fluid.

There is no short cut to the accurate diagnosis of drunkenness. The only safe guide is by means of careful and systematic clinical examination.

CLINICAL ASPECTS OF LIGHT TREATMENT

In the *Quartz Lamp*, Nov. 15, 1927, Dr. E. Mayer, says that curative results in light therapy may be brought about without the production of marked cutaneous burns. Ultraviolet rays from about 313 to 250 millimicrons produce skin erythema, but erythema is not produced by even one hour's exposure of the skin to ultraviolet rays longer than 330 or shorter than 250 millimicrons. Erythema depends on the intensity and duration of exposure to the source of ultraviolet rays, the distance from the source, the temperature, and the individual sensitiveness of the skin.

Dosage of light cannot be fixed, on account of the variation of the different factors. An increased bactericidal power in the blood can be produced by the rays, while preserving the sentitiveness of the skin. On the other hand, increased dosage may produce a decrease in the blood's bactericidal power.

The important thing, according to Dr. Mayer, is to use short and intense exposures without overheating the body. Exfoliating skin is very opaque to ultraviolet irradiation, while newly exposed skin is very sensitive. When the skin becomes insensitive to large doses of mercury vapor quartz light, an exposure to long-flame carbon arcs is employed.

In an experience of ten years, Dr. Mayer has obtained the best results with the quartz lamp in intestinal tuberculosis.

SENDING PATIENTS TO GERMAN SPAS

A. H. Applemann, American Director, German Health Resorts, in *Med. Economics*, March, 1928, thinks that $350 will cover the cost of a trip and six weeks' stay in one of the better class German spas, and that this is within the means of the average patient. The therapeutic effects of such a sojourn are just as pronounced with one class of patients as with another.

WHY DOCTORS LEAVE THE RURAL DISTRICTS

Dr. J. B. H. Waring, Blanchester, O., gives, in *Med. Economics*, March, 1928, these, among other reasons, why doctors leave rural districts:

First, the better class people in the rural districts pass by their local doctor and drive to the larger towns to consult the doctors there.

Second, the country doctor gets most of the minor emergency work and of the "poor-pays" and "deadbeat" practice.

Third, surgical work of any importance is carried off to the cities. There is no "fee division" for the home doctor in these cases.

Fourth, the alluring advertisements of great opportunities in rural districts have proved, in most cases, to be bitterly disappointing to the young medical men who have been caught by them. Several examples of this kind are cited by the author. The villagers neither patronize nor pay a newcomer, and old doctors in the vicinity often make the place too hot for him; he is a butt for every kind of criticism. Rural practice is a mirage; it looks good to the young doctor, but he finds it a desert and gets back to the city.

DIATHERMY IN SKIN TUMORS

Dr. Richard Vallack, of Sydney, Australia, writing in the *Eye, Ear, Nose and Throat Monthly* for December, 1917, states that the desirable factors for a method of treating neoplasms of the skin are:

1.—Certainty of eradication.
2.—Minimal destruction of adjacent healthy tissue.
3.—Minimal resultant scarring.
4.—Minimal hemorrhage.
5.—Minimal postoperative pain.
6.—Speed in operating.
7.—Minimal resultant shock.

In diathermy, properly applied, we have, I believe, a method that fulfils these aims in a manner more sure and certain than does any other technic at our disposal.

It is of the greatest importance to use a powerful and thoroughly reliable apparatus, designed for thermopenetration alone, and giving the Oudin (extremely high voltage with almost no amperage) current and the d'Arsonval (moderately high voltage with considerable amperage).

The methods for attacking the new-growths are:

1.—Electrodesiccation (using a weak Oudin current).
2.—Fulguration, or high-frequency cauterization (using a strong Oudin current).
3.—Electrocoagulation (employing the d'Arsonval current).

The dispersing electrode for the d'Arsonval current should have a *minimum* of 6.4 sq. cm. (1 square inch) of surface for each 100 milliamperes of current used.

Small growths are best removed under local anesthesia, but extensive operations require a general anesthetic. If ether is used in connection with this form of treatment, its explosive nature should never be forgotten.

If any large blood-vessel is in the immediate vicinity of the field of operation, it should be ligated at or before time of operation.

Roentgen rays may safely be applied after any of these procedures, if indicated.

SCARCITY OF COUNTRY DOCTORS

Commenting upon the suggestion made some months ago by the National Grange that the medical needs of rural districts be supplied by lowering the standards of medical education, if necessary, an editorial in *J. Indiana M. Ass'n*, Feb., 1928, asserts that the people in these districts would not be satisfied with insufficiently qualified doctors.

The writer thinks that the trouble with the rural communities is that the inhabitants there do not appreciate good service which they may obtain right at home; and, on the other hand, the good physician who locates in a rural community does not seem to appreciate the fact that because he is in a rural community is no reason why he should not be treated as well as his brother practitioner in the city. He is accepted on his own rating of himself.

There are economic reasons why physicians do not go to the rural districts and the inhabitants should change the conditions so as to render them attractive, and then they would get sufficient fully qualified doctors.

ETHYLENE-OXYGEN ANESTHESIA

After four years' trial and an experience covering many thousand anesthesias, Dr. Isabella C. Herb, in *Anesthesia and Analgesia*, Dec., 1927, states that ethylene is superior to nitrous oxide, in that it produces better relaxation and because sufficient oxygen can be given with it to prevent cyanosis, hence there is better oxygenation of the tissues throughout anesthesia.

Ethylene does not produce as great relaxation as ether. There is little or no

sweating during anesthesia, which is of value in weak or dehydrated patients, as heat and fluid are thus conserved.

The postoperative condition of the patient is better than following ether anesthesia, because there is little or no vomiting.

As it does not irritate the respiratory tract, ethylene can be given during acute or chronic pulmonary affections without fear of aggravating the inflammatory process.

Ethylene does not depress respiration nor circulation, hence it is eminently the anesthetic of choice for the handicapped patient when a general anesthetic is indicated. Also, since it does not depress kidney function, it is preferable to ether in ureteral catheterization, and preferable to nitrous oxide in severe bladder disease because the bladder reflex is not so active.

Ethylene should not be given in the presence of an open flame, actual cautery or any sort of an electrical apparatus capable of producing a spark.

PATHOLOGY OF THE FEMALE URETHRA

In *Internat. J. Med. & Surg.*, Jan., 1928, Dr. Winfield Scott Pugh, of New York, says that urethral examinations in women are infrequent. Even in frank cases of gonorrhea, 90 percent of the urethral cases are overlooked. The methods of examination are by direct inspection, palpation, sounding, urethroscopy and microscopic and bacteriologic examination.

Nonspecific urethritis is the most commonly noted condition.

The author's best results in the treatment of gonorrheal urethritis with cervicitis have been obtained with diathermy. An application of heat to the point of tolerance, for about thirty minutes, three times a week, will as a rule soon clear up the infection.

Two conditions which Dr. Pugh stresses are inflammations about Skene's ducts and narrowing of the internal sphincter, somewhat corresponding to median bar in the male bladder neck.

GLASS TRANSMISSION OF ULTRAVIOLET RAYS

Drs. H. Goodman and W. T. Anderson, in *Boston M. & S. J.*, Jan. 12, 1928, report an experimental study of glass and glass substitutes for quantitative and qualitative transmission of ultraviolet rays. A number of samples supplied by manufacturers were tested.

The tests showed that the various glasses could be divided into three groups: the first group did not transmit better than ordinary window glass; the second group allowed the transmission of a high percentage of the rays; the third group a small percentage of the rays.

Transparent fused quartz transmits about 87 percent of the incident radiation, but its cost makes it prohibitive as a window glass substitute; "Clear Corex" transmits about 70 percent but, though relatively inexpensive, it is not commercially available in quantity.

The authors found a number of glasses capable of transmitting the short ultraviolet rays of sunlight. They also found that there is no evidence to substantiate the claim that health would be improved by using such glass substitutes; and, until carefully controlled experiments have demonstrated their value, their employment as an aid to health should be held in abeyance.

THE COD-LIVER OIL ANTIRACHITIC VITAMINE

Absorption spectra experiments show that acid extracts of cod-liver oil are in accord with irradiated ergosterin, that is, with the antirachitic vitamine. The more alkaline the extracts the more the short wave ultraviolet spectrum disappears.

Experiments with rats showed strongly antirachitic effect of the acid and a weak effect of the alkaline extract of cod-liver oil. The vitamine in cod-liver oil can be destroyed by irradiation.—DR. A. ADAM, in *Klin. Wchnschr.*, July, 1927.

CLOSURE OF ABDOMINAL INCISIONS

The closure of an abdominal wound may seem a simple procedure, but few there be whose technic is so perfect as not to be susceptible of improvement.

Some suggestions made by Dr. F. C. Buchtel, in *Colorado Med.* for January, 1928, seem worthy of careful consideration.

The method he has used for two years past consists in passing heavy silk tension sutures through all the layers of the abdominal wall and tying them over a glass rod on each side of the incision. The same general principle has been utilized for many years in tying the tension sutures through buttons.

A glass rod extending the full length of the incision and thus making the pressure the same throughout, is a great improvement over a button, from the increased firmness and security thus obtained. The patient's comfort is also greatly enhanced by the use of the rod.

Six sutures of No. 14 silk are used. They are passed in pairs, at the upper, middle, and lower parts of the incision, from within outward. The needle enters the peritoneum one-quarter inch from its edge and emerges from the skin over an inch from the incision.

As soon as the sutures are passed they are tied over the rod on the operator's side of the incision. The first assistant then makes traction on the sutures on his side of the incision, thus approximating the two sides of the wound. Tension is relieved and an easy closure of the peritoneum is facilitated.

Patients with acute infiammatory abdominal lesions are at times very hard to close without tearing the peritoneum. Not infre-

quently more time is consumed in closing the incision in such a case then in doing the intra-abdominal part of the operation. The value of the above-mentioned procedure is very great in this type of case.

The peritoneum and transversalis fascia are closed with double plain No. 2 catgut, used as a continuous suture. The suture line is placed farther back from the peritoneal edge than that portion pierced by the silk tension suture. This overcomes the usual objections to the use of through and through sutures, as the silk is then extra-, not intra-peritoneal, after the first row of catgut sutures is properly placed.

The accurate and completely water-tight approximation of the peritoneum and transversalis fascia is the most important step in closing any abdominal incision. Great care should be taken that the transversalis fascia is included in the peritoneal suture. This layer sometimes slips back a little way from the peritoneal edge and unless care is exercised this most important layer remains unsutured and a hernia is apt to result from the error.

MANAGEMENT OF ABORTIONS

Miscarriage or abortion is frequent. In an article on the subject by Dr. A. D. Willmoth, in *Med. Rev. of Rev.*, Jan., 1928, he recommends that in habitual abortion patients should be kept in bed at what would be their menstrual period, and tonics administered.

In threatened abortion, the patient should be kept in bed until all signs disappear. Rest and sleep should be enjoined even at the expense of an opiate. There should be no meddling with the uterus, either by finger or curette.

If there is any doubt whether the uterus will empty itself and no real bleeding is occurring, no examination should be made.

In socalled incomplete abortion the author's choice is not to invade the uterus unless the discharge suggests the retention of secundines. Sit the patient well up in bed; allow no food for 48 hours; give water by rectum; morphine to keep patient quiet; clean lower bowel by enemas. Administer, intravenously, sodium iodide and guaiacol—31 grains (2 Gm.) of the former and ¾ grains (0.048 Gm.) of the latter. In many cases the infection will localize in the pelvis and the Douglas cul-de-sac can be incised from below and drained. This treatment is also applicable to cases where an abortion has stirred up an old salpingitis.

LARVA MIGRANS

Larva migrans is not very common in the United States and is seen most often in the South, but in these days of free and rapid travel, it may be encountered anywhere. It is an animal parasite infesting the skin.

Unlike the itch-mite, this parasite burrows along indefinitely, like a mole, traveling ½ to 1 inch in 24 hours, and leaving behind a red line or narrow, raised ridge which gradually fades out. This line twists and zigzags about and may be found on any part of the body.

The duration of the disease may extend to two or more years; the only subjective symptom is more or less severe itching; no treatment heretofore proposed has given results.

In *Military Surgeon*, May, 1928, Maj. M. L. Todd, M.C., U. S. A., reports a case like this, with an effective treatment. He froze the skin with ethyl chloride; split the burrow with a fine galvano-cautery point and cauterized its bottom. The reaction was slight and the cure instantaneous. The scar is scarcely visible.

VAGINAL ULTRAVIOLET THERAPY

Dr. L. Stieböck, in *Mediz. Klin.*, Oct. 21, 1927, describes a method of applying ultraviolet therapy *per vaginam* by a specially constructed lamp and speculum. The rays are directed on the cervix and posterior vagina through a Trelat speculum. Only patients with severe troubles are treated in this way.

Altogether, 36 cases of metritis, adnexal tumors, kraurosis, etc., have been treated. In general, there have been 40 percent of recoveries, 25 percent improvements and 30 percent failures. In noncomplicated cervical metritis the results are particularly good.

DIFFERENTIAL BLOOD COUNTS

Opinions differ in regard to the preferential value of slides or cover-glasses in studying blood films. In *J. Lab. & Clin. Med.*, Jan., 1928, Dr. D. N. Beacom, Denver, Colo., says that blood films, properly prepared on slides, give an accurate differential count, provided enough leukocytes have been classified and all of the blood has been utilized in making the preparation. If all of the blood in the drop has not been used in making the film, the neutrophilic percentage will be decreased proportionately to the thinness of the smear.

A differential blood count on a film prepared by most methods is seldom accurate if only one hundred cells are classified.

A differential count made from either slides or cover-slips is accurate within 3 percent if correct technic has been employed in preparing the film and if three hundred cells, in three different areas, have been studied.

Leukocytes in cover-slip preparations are not more evenly distributed than in those made on slides.

A simple and accurate method called the "slide and cover method," devised by the author, is described. A small drop of blood is placed near the end of a clean slide and a medium to thin cover-slip is dropped on the blood, which will then flow out in a thin layer if the glass is clean and if there is not too much curvature to the slide. If the

film does not flow out properly, very gentle pressure will bring this about. As soon as the blood has stopped flowing, the slide is held on the table with the left hand and the first two fingers of the right are placed near the edges close to the left end of the cover glass. Then, with an even, fairly rapid pull, it is slid along the slide in the direction of its long axis. This leaves a smooth, even film.

INJECTION TREATMENT OF VARICOSE VEINS

Good progress is being made with the injection treatment of varicose veins and ulcers. In *Practitioner* (Lond.), Jan., 1928, Dr. R. Thornhill states that he has found that the Genovrier solution gives the best results. The constituents of this are:

Urethane	2 Gm.
Quinine hydrochloride	4 Gm.
Distilled water	30 cc.

The solution is sterilized by boiling and it should be immersed in hot water before using. The patient sits while being treated.

An ordinary 2 cc. Record syringe, with a No. 17 surgical point, is found the most suitable. At the first treatment, not more than 1 cc. is injected. At subsequent treatments, 3 cc. are injected.

The skin over the vein to be treated is swabbed with ether; the point of the needle is inserted into the lumen of the vein; 0.5 cc. is injected; the needle removed; and a pledget of cotton is pressed firmly over the puncture for 30 seconds. This process is repeated along the vein, at intervals of 1 to 2 inches, and 4 or 5 injections are given. Each puncture is then cleaned with ether and sealed with collodion.

In over 15,000 cases reported, not a single case of embolism was observed. An average of 4 treatments, at intervals of from 4 to 8 days, is necessary. Pain is negligible. The author states that the very great majority of varicose ulcers are also curable by this method.

DIAGNOSTIC VALUE OF OPTIC NEURITIS

Optic neuritis, according to Dr. A. J. Ballantyne, of Glasgow, in *Eye, Ear, Nose and Throat Monthly*, Jan., 1928, presents itself under two forms: (1) as the papilledema associated with intracranial tumor and other cerebral diseases; and (2) as the optic neuritis of renal disease.

The optic neuritis of meningitis differs from that of cerebral tumor in being less prominent and more diffuse, but in tuberculous meningitis the disk swelling is apt to resemble that of intracranial tumor.

In a special study of 61 cases of epidemic cerebro-spinal meningitis, Ballantyne saw 5 cases of optic neuritis.

Several cases are mentioned in which definite head injury, not clinically apparent, was diagnosed from the presence of optic neuritis.

Some unusual types of optic neuritis are mentioned by the author; namely, that following severe hematemesis, especially hemorrhage from the stomach. The eye lesion does not appear until several days after the hemorrhage. Another rare type is that occurring in association with pregnancy.

Ballantyne discusses at length the occurrence of optic neuritis following nasal and sinus disease. Very few of the author's cases of retrobulbar neuritis, whether acute or chronic, have shown nasal sinus disease, and Ballantyne appears to think that the two are less frequently associated than is surmised. Multiple sclerosis probably accounts for a larger proportion of the cases of retrobulbar neuritis than does disease of the nasal sinuses.

HEAT AND THE FUNCTION OF ORGANS

Heating an organ one degree above its normal temperature increases its efficiency ten percent.

The use of diathermy to heat the liver has given good clinical results in chronic disorders of the biliary system, and has relieved, if not cured, many cases of sugar intolerance.

Heating of the long bones and of the spleen seems to stimulate the blood-forming organs, and is helpful in cases of anemia which respond slowly to other measures. This work should be done with a machine which does not give more than one million oscillations per second.

In cases of dysmenorrhea, diathermy, applied to the pelvis, frequently gives highly gratifying results.—DR. A. DAVID WILLMOTH, Louisville, Ky., in *Med. Herald & Physiotherapist*, Dec., 1927.

HYPERTENSION

Dr. E. J. Jasper, Astoria, Ore., in *Northwest Med.*, Feb., 1928, deals with the clinical types of hypertension.

The nervous type, most frequently seen in women and characterized by dizzy spells and palpation of the heart, is best treated by rest and sedatives.

In the peripheral resistance type, diagnosis can be made by the general aspect and appearance of the patient. There are tightened arteries and a high systolic pressure (from 200 to 300 mm.), with a constantly high diastolic pressure of 100 or more.

In treatment, the iodides seem to benefit and good clinical results can be obtained from the intravenous injection of sodium iodide, sodium salicylate and colchicine. The injections are given at 3- to 5-day intervals. An occasional intravenous injection of sodium cacodylate, gr. vii (0.46 Gm.) seems to hasten the progress.

Cardiac hypertension, the author suggests, is due to overfunctioning of the heart. In these cases (which are not associated with nervousness, peripheral resistance or tox-

emia) if 1/10 or 1/5 gr. (6.4 to 13 mgm.) of extract of belladonna is given, three or four times a day, the pressure will come down and the patient be relieved automatically. The belladonna is given in pill form, combined with a grain (64 mgm.) of sodium nitrite.

In the toxic type of hypertension the treatment is to remove the cause.

LOW BLOOD PRESSURE

Low blood pressure has commanded much less attention than the reverse condition. Deductions from the study of some very definite cases are given by Dr. A. Graham-Stewart, in *Practitioner* (Lond.), Feb., 1928.

The general conclusions reached are:

1.—A persistent low blood pressure, provided it is not part of a grave syndrome, does not, of itself, tend to shorten life.

2.—Persistent low blood pressure cases are not bad operative risks. On the contrary, they appear to tolerate operations particularly well; nor do operations tend to lower the pressure still further. Operations may be carried out without any more risk than in a normal pressure case.

3.—Low pressure patients are not generally the subjects of gross arterial degeneration.

4.—The one symptom complained of by practically all low pressure patients is easy fatigue.

5.—The great majority of these patients have been toxemic, some to a gross degree; most commonly the toxemia is of intestinal origin.

6.—Low pressure *per se* is not to be dreaded, nor does it seem to predispose to a bad prognosis. The state often indicates a lowered general tone and treatment should be directed against toxemia as the principal cause.

7.—A persistent, inveterate and progressive lowering of the pressure in tuberculosis, in acute lobar pneumonia, in cachectic states (as in cancer) and in the idiopathic anemias, is a grave sign and is almost invariably a herald of impending death.

8.—In young people low blood pressure may be indicative of a pretuberculous state.

DIATHERMY IN ANEURISM

In *Southern Med. & Surg.* for Nov., 1927, Dr. W. W. Blackman, of Atlanta, Ga., publishes an interesting case report, with comments.

The patient was an old man with a fusiform aneurism of the descending thoracic aorta, which gave rise to dorso-lumbar pain, at times so severe as to require opiates for its control. He was overweight and had a blood pressure of 210/104.

Treatment: A diet of lean meats, low carbohydrate vegetables and fruits, to yield 70 Gm. protein and 1,500 calories. The diet was poor in salt and fluids. Bed rest was ordered for three weeks, with gradually increasing exercise following; the electric light bath, given in the reclining position to the point of moderate perspiration and followed by the neutral tub for diuresis and for relaxation of the arterioles; the sinusoidal electric tub for involuntary exercise and for heightening metabolism; diathermy 600 to 1,000 ma., with block-tin electrodes, administered through the aortic region. Bismuth was given intramuscularly and mercury and potassium iodide by mouth.

Results: The diathermy treatments relieved the severe attacks of pain. After four weeks the pain entirely ceased and the patient was able to be up and around. The blood pressure dropped finally to 144/85 and x-ray showed the heart and aortic dilatation decreased. The patient left after 6 weeks of treatment, free of all pain and able to return to light daiy duties. He lost 12 pounds in weight, meanwhile improving greatly in strength.

Diathermy through a part intensifies the effect in that part of any drug present in the blood stream. It is probable that the effects of the bismuth, mercury and iodides were thus localized in the aorta.

Diathermy was used in this case to take the place of opiates, and succeeded very well; it also produced curative effects. It has since been used, in a similar manner, and with success, in several cases of angina pectoris.

DIAGNOSIS AND PROGNOSIS OF NEOPLASMS

In *J. Lab. & Clin. Med.*, Jan., 1928, Dr. W. C. MacCarthy, Rochester, Minn., says that the master key to diagnosis and prognosis of malignant and benign neoplastic and inflammatory conditions is a checked experience with the differential, detailed morphologic characteristics of adult tissue cells, reparative regenerative cells and neoplastic cells. All of these may be recognized in the fresh, unfixed condition, with or without stain, if the oil immersion lens of the microscope be used. Freezing methods and the different staining methods are only means of decreasing the time of search. They, in themselves, will not make great and reliable diagnosticians or prognosticians, any more than a good box of colors, a piece of canvas, some good brushes and an easel will make an artist. This is mentioned because more emphasis has been laid by writers and talkers on the method than on the necessary training and experience.

For the benefit of those who are hunting for short cuts, Dr. MacCarthy says that, after long and constant experience and study, there *is no short cut* to becoming a great clinical pathologist. The subject cannot be learned from books, any more than the art of literature or of painting can be learned from books. It is the short-cut pathologists who have thrown discredit upon tissue pathology, which is the basis of our knowledge of disease.

No one individual can possibly be efficient in tissue pathology, bacteriology, serology, immunology, r a d i o l o g y, roentgenology,

chemical pathology, parasitology and general clinical miscroscopy. Still, this is what is expected by the great majority of hospitals; they even expect it from young men and women. It cannot be done and should be discouraged by the members of the profession. The differentiation of pathologic conditions and their clinical interpretation is an art which involves knowledge of technical details, experience and a broad conception of disease.

LOSS OF APPETITE, ATTACKS OF ABDOMINAL PAIN AND VOMITING IN CHILDHOOD

Dr. J. Brock, in *Münch, med. Wchnschr.*, Nov. 25, 1927, says that children who are not disposed to eat sufficient food should be treated according to fixed rules: No food should be given between meals; three meals are usually sufficient; no soups; only small quantities given at a time; concessions to the child's taste should be made if possible, but when an essential diet is disliked the child should be allowed to go hungry until he accepts it.

Abdominal pain (navel colic) indicates a more serious underlying affection, which should be searched for.

Habitual vomiting is sometimes relieved by complete change of environment.

In acetonemic or cyclic vomiting the child should be encouraged to eat, with the object of cutting short the attack. Symptoms of cell thirst and hunger should be treated by the rectal or subcutaneous administration of dextrose. Collapse may be treated by the use of hot water and cardiac stimulants. Since the vomiting is due to nervous disorders, concentrated food should be given in small quantities and after long intervals. Bits of ice and iced sugar water are useful in warding off attacks.

THE PHYSICIAN AND WORKMEN'S COMPENSATION

There is still great unfamiliarity on the part of many physicians with the basic principles of Workmen's Compensation Acts. Besides, the legal definitions and interpretations, etc., vary in different states.

Dr. H. H. Kessler, of Newark, N. J., writing in *J.A.M.A.*, March 17, 1928, thinks that the profession has been too apathetic in this matter. When we realize how great is the toll of industrial accidents—that the total for 1927 was more than six times as great as the military casualty list in the recent World War—the importance of the problem to every practitioner can be readily appreciated. It therefore behooves the physician to best serve his industrial patients (who make up a large proportion of the average physician's practice) by familiarizing himself with the various features of the compensation laws.

The points to which Dr. Kessler calls particular attention are: determining whether a given clinical condition is traumatic or an occupational disease; the question as to what constitutes adequate medical and surgical service; the matter of selection of physicians and determination of fees; distinguishing between temporary and permanent disability and evaluating the amount of permanent injury.

Dr. Kessler points out the laxity of some practitioners in not furnishing the necessary medical reports to insurance companies. In some states the law makes this compulsory on the part of the injured man.

SYPHILIS AND MARRIAGE

Dr. F. Pinkus, writing in *Mediz. Klinik.*, Nov. 18, 1927, thinks that it is possible for a non-treated syphilitic male to be contagious for 6 years after the initial attack, and probably even longer.

The male, treated with arsenicals at the time of infection, in the primary stage, although not usually capable of transmitting syphilis, yet, as a matter of precaution, should not marry until at least 2 years later.

The male, treated in the secondary stage, should be considered contagious for 6 years, and only if he has shown no symptoms for at least 2 years should he be allowed to marry.

Syphilitic females are not usually treated in the primary stage. Even if considered non-contagious after a delay of 6 years, treatment should be renewed after each pregnancy.

In the discussion of this subject by Finger and others in *Mediz. Klinik.*, Nov. 18 and 25, 1927, the general consensus of opinion seemed to be that the rigorous rules, laid down at the International Congress of Dermatology, 1896, in regard to the marriage of syphilitics, could be modified, owing to the efficacy of the newer arsenical treatments.

The initial treatment does not, however, suffice and there should be two or three subsequent, interval arsenical treatments and tests for negativity. The blood Wassermann test is not of so much importance as the cerebrospinal fluid test. Generally, 2 years of complete negativity is agreed upon for the male who has been properly treated.

In the case of females, a longer delay is considered desirable. Pregnancy should not be allowed for 6 to 8 years following the initial attack.

New Books

BLUMER: BEDSIDE DIAGNOSIS

BEDSIDE DIAGNOSIS. *By American Authors. Edited by George Blumer, M. D., David P. Smith, Clinical Professor of Medicine, Yale University School of Medicine; Attending Physician to the New Haven Hospital. Containing 890 Illustrations. In 3 Volumes, with separate Index Volume. Philadelphia and London: W. B. Saunders Company.* 1928. *Price* $30.00.

The work before us is a clear indication of the rapidly growing tendency in present-day medicine to discountenance the undue emphasis which has been placed upon laboratory methods of diagnosis, and to insist on the paramount importance of carefully observing the symptoms of the whole patient in arriving at a diagnosis. The editorial preface expresses the feeling that there will never be a time when the use of the senses will cease to be the most important factor in diagnosis.

While in every part of the three large volumes which make up this important work on bedside diagnosis, the clinical symptomatology is stressed, yet the value of laboratory findings is given its due meed as an accessory and often very necessary aid.

The work complies with the present-day method of dealing with a colossal subject; that is to say, 64 men, selected for their particular accquaintance with various disease conditions, have contributed chapters dealing with their specialties, and the whole is correlated and harmonized under the editorship of Dr. Blumer.

The ideas underlying diagnosis in general are summed up as follows:

When a diagnosis has been reached, all of the symptoms and signs must be compatible with it; when there is an apparent conflict between the subjective and objective symptoms, the latter have greater weight for diagnosis; when two diseases are possibilities, the chances favor the commoner of the two; diagnoses reached by exclusion are dangerous.

These are the general bases governing the diagnostic procedures described.

The work consists of three large volumes, each with its own index, together with a separate and complete desk index for ready reference. Volume I deals with infections and intoxications, developmental diseases, allergic, metabolic and upper digestive tract diseases; volume II deals with the liver and subsidiary regions, and with diseases of the thoracic region and circulatory and urinary systems; volume III includes the endocrines, nervous vasomotor, trophic and psychiatric diseases.

The practitioner who possesses these books will have access to a rich mine of the most valuable information. With its help and the careful exercise of one's faculties of observation there should be no reason why one could not become an expert diagnostician and, in the last analysis, diagnosis is more than half of successful treatment.

The purchase of this set of books is most heartily commended to all those who can afford and are willing to pay the price for something well worth all that is asked for them.

SOLIS-COHEN AND GITHENS: PHARMACOTHERAPEUTICS

PHARMACOTHERAPEUTICS, MATERIA MEDICA AND DRUG ACTION. *By Solomon Solis-Cohen, M.D., and Thomas Stotesbury Githens, M.D. New York and London: D. Appleton & Company.* 1928. *Price* $15.00.

This stupendous volume should interest not only every physician, but the workers in related sciences as well. Most of the important drugs used in medicine are considered in systematic detail, including source, chemistry, summary of actions and uses, materia medica, pharmacologic action, and therapeutics.

A real attempt has been made to present the latest information about the various drugs and the attempt has, in general been successful. The book fills a real need, and has few rivals. Every physician needs the information contained in this work.

E. H. V.

ALVAREZ: MECHANICS OF DIGESTIVE TRACT

THE MECHANICS OF THE DIGESTIVE TRACT. *An Introduction to Gastroenterology. By Walter C. Alvarez, M.D., Associate Professor of Medicine, University of Minnesota (The Mayo Foundation). With One Hundred Illustrations. Second Edition. New York: Paul B. Hoeber, Inc.* 1928. *Price* $7.50.

Many thoughts are suggested as one looks over Dr. Alvarez's book: the marvellous control mechanism for the performance of every function of the human body, digestion and metabolism being the functions here considered; the gradual advancement of exact knowledge, due to persistent research work; and, finally, how little is really known, by those who practice the art of medicine, in regard to the actual processes occurring in conditions which they treat.

In regard to the last idea, how many practitioners are there who are acquainted with the gradients of rhythmicity and peristalsis in the intestine or can explain why food or its residue moves at different rates in different segments of the intestine? Yet

that it does so and that there are particular factors governing these movements, more or less, if not altogether, independent of nervous control, seems evident.

In his volume Dr. Alvarez shows that, owing to differences in stimulative irritability, the rate of rhythmic contraction of the intestinal muscle is graded downward from the pylorus to the ileocecal sphincter. Dr. Alvarez's own original work and that of the many other research workers who have advanced our knowledge of peristalsis and bowel mechanics in general are reviewed and discussed in logical sequence.

While the book is sufficiently technical for the research worker in physiology, it is sufficiently readable and practical for the medical student or practitioner who is looking for help on a clinical or surgical problem. There is much information, especially in this revised second edition of the book, which every practitioner ought to possess, because disorders arising in the digestive tract, especially the stomach and intestines, and their sequellae are matters of every-day practice.

From this presentation one gets the idea that in the near future the bases of the therapeutics of the digestive tract will undergo a drastic change, owing to the newer ideas garnered from more exact knowledge of physiologic processes. For this reason, as well as for several others, the physician who keeps abreast of the advances in science should have this work on his shelves and should study it. There is, moreover, a certain fascination in watching the thin, red line of real scientific advance, as here portrayed in connection with the physiology of digestion. This is, as well, a fine piece of bookmaking. Paper, type and binding are excellent; illustrations are numerous; and there is a fine bibliography of more than 90 references at the end.

No medical library of any pretentions will be complete without this volume.

CRONER: BERLIN UNIVERSITY CLINICS

DIE THERAPIE AN DEN BERLINER UNIVERSITAETSKLINIKEN. *Edited by Dr. Wilhelm Croner. Ninth revised edition. Berlin: Urban & Schwarzenberg, Friedrichstrasse* 105B. 1927. *Price Mk.* 14.

For many years Dr. Croner has rendered an interesting service, not only to the German-speaking, but to the entire medical profession, by providing a reliable source of information "how they do it in the Berlin university clinics." As heads of clinics change and as new methods of treatment are being introduced, new editions become necessary, and the fact that nine editions have been published in the course of a quarter of a century shows that Croner has kept his work abreast of the times. All specialties are represented, and in each clinic—there are twelve—the diseases are taken up alphabetically.

The value of the handy and easily read volume is enhanced by the addition of sections on poisoning, dietetic cures, principles of vaccino- sero- and protein therapy and organotherapy. A double index, one for diseases and the other for methods of treatment and drugs, is an excellent time-saving device.

The book represents a resumé of what one would learn were he to spend a long time in any one or all of the dozen Berlin university clinics, so far at least as the therapeutic indications and methods are concerned.

G. M. B.

MARCOVICI: DIET

HANDBOOK ON DIET. *By Eugene E. Marcovici, M.D., Formerly Assistant to Professor von Noorden in Vienna; Instructor, Post-Graduate Hospital; Assistant Attending Physician, Roosevelt Hospital, Out-Patient Department, New York. Philadelphia: F. A. Davis Company.* 1928. *Price* $3.50.

The increasing attention which the dietary treatment of many diseases has received during recent years is responsible for the many books which cover this subject from various standpoints.

Dr. Marcovici, who was formerly an assistant to von Noorden in Vienna, states that diet books are written either in highly scientific terminology or else so simply as to be comprehensible to any layman. The former have had a limited field; the latter often sacrificed accuracy for simplicity. The purpose of the present book is to fill the gap between the two. It is sufficiently accurate to warrant the physician in recommending its perusal to his patients.

The author's purpose seems to have been attained. The objectionable feature of telling a layman too much about the details of disease is avoided; at the same time, the purpose of the particular diet recommended for certain classes of diseases is made clear and explicit directions given in the various menus. The patient knows the food value of what he is eating and why he is eating that particular kind of food.

Many practitioners will find this book decidedly helpful.

WARING: MALIGNANT DISEASE

THE SURGICAL TREATMENT OF MALIGNANT DISEASES. *By Sir Holburt J. Waring, M.S., M.B., S.Sc. (Lond.), F.R.C.S., Surgeon to and Joint-Lecturer at St. Bartholomew's Hospital and Medical College, etc. Illustrated with* 19 *Color Plates and* 277 *Figures. London, New York, etc.: Humphrey Milford, Oxford University Press.* 1928. *Price* $15.00.

This work is an extension of the author's Bradshaw Lecture, delivered in 1921 before the Royal College of Surgeons, London, based more especially on the surgical treatment of malignant disease in St. Bartholomew's Hospital, London.

As a review of the clinical and surgical aspects of malignant disease in general,

the book has many excellent aspects. It has evidently been written with conscientous care, in an endeavor to guide surgeons in regard to the value of operations in the various kinds of malignant neoplasms, and in the selection of the type of operations. The illustrations are clear and pertinent and the colored plates are especially commendable.

As a practical book, however, it can scarcely be recommended to the general surgeon or specialist. Covering such a large extent of ground in one short volume, the technic of the surgical treatment can scarcely receive sufficient attention and, in most cases, it seems to us that it does not. Furthermore, the radical operations of nephrectomy, hysterectomy, etc., are sufficiently and more adequately described in general and special surgical works which are more likely to be used by specialists.

The typography and general bookmaking are excellent, as is the rule with the publications of the Oxford University Press.

DAYTON: PRACTICE OF MEDICINE

PRACTICE OF MEDICINE. *A Manual for Students and Practitioners. By Hughes Dayton, M.D., Irvington-on-Hudson, New York, Attending Physician to the Grasslands and Tarrytown Hospitals; Consulting Physician to the United Hospital, Portchester, New York. Fifth Revised Edition. Philadelphia: Lee & Febiger.* 1928. *Price* $2.25.

A handy, compact compend of medicine which contains the essentials of etiology, symptoms, diagnosis and treatment of the various morbid entities, arranged in sections according to a regional classification.

The book is intended as a concise manual for students and practitioners; and the fact that it has run into five editions shows that it has met a demand.

WILKINSON: STRABISMUS

STRABISMUS. *Its Etiology and Treatment. By Oscar Wilkinson, A.M., M.D., D.Sc., Surgeon in Chief of Washington Eye and Ear Hospital, Washington, D. C. Illustrated. St. Louis: C. V. Mosby Co.* 1927. *Price* $10.00.

Dr. Wilkinson says that his object is to impress upon the public, the general practitioner and the oculist, the importance of early, definite treatment of cases of strabismus and to warn them of the evil of "watchful waiting".

The book covers the etiology of strabismus, the anatomy and physiology of the ocular muscles and of the visual organs, the types of strabismus and the treatment, both non-operative and operative.

In regard to treatment, the author's position may be judged from his statement that it has been his experience that, where atropine and lenses do not markedly reduce the degree of squint within the *first month*, they do not do so subsequently, even though used for years, and that the *glass* delusion should be banished from both the public and the profession. A strabismus patient should be operated upon as early as it can be determined that he cannot be cured otherwise, and within six months after proper treatment has failed to reduce the squint.

The book is well illustrated and, while of particular value to oculists, it contains much that should interest general practitioners, owing to the common occurrence of strabismus, especially in children.

FREE: CHEERFUL VERSES

THE HUMAN TOUCH AND OTHER POEMS. *By Spencer Michael Free, A.M., M.D., F.A.C.S. New York City: International Journal of Surgery Co., Inc.,* 18 *East* 41*st Street.* 1925. *Price* $2.00.

Here is another little volume of verses by a physician.

Most of the subjects are homely and familiar; the versification is, in the main, sound; the language used is simple and the ideas are readily grasped—there is no "hibrow" stuff, in thought or diction.

A pleasant little volume to pick up in a spare moment or to place on the tabie in the waiting room.

KELLY: GYNECOLOGY

GYNECOLOGY. *By Howard A. Kelly, A.B., M.D., LL.D., and Collaborators. New York and London: D. Appleton & Company.* 1928. *Price* $12.00.

It is no exaggeration to say that, during more than the quarter of a century past, Dr. Kelly has been the outstanding representative of American gynecology; and that during this period most of the drastic innovations in operative gynecology have been consummated—changes which have brought this country into the foremost place in gynecologic practice.

For these reasons, the appearance of the present work is an event in gynecology. It is the crystallized expression of the practice of gynecology as it exists in this country today

The book contains 49 chapters, covering all phases of the diseases of women and their medical and surgical treatment. Dr. Kelly has personally contributed 18 of the chapters and the other chapters are written by specialists on the subjects treated—men who either have been closely associated with Dr. Kelly or else have been chosen on account of their special knowledge and experience.

As it stands, the book not only fills the need of a thorough, up-to-date textbook of gynecology, but it includes many border matters which have not usually been included in such books but are commonly necessary and applicable in practice. Such, for instance, are the chapters on psychiatry and mental hygiene, protein therapy, ultra-

violet radiation, endocrinology and organotherapy. The whole field is covered in about a thousand pages and wherever illustrations aid in elucidating the text they are excellent and profuse.

Whether for the student, teacher, specialist or general practitioner, Dr. Kelly's book should at once take a leading place among textbooks of gynecology. The author's ripened experience provides an editorial egis which assures against the exploitation of any fads and the inclusion in the book only of methods, the value of which has been fully established by constant observation in practice.

CROSSEN: GYNECOLOGY FOR NURSES

GYNECOLOGY FOR NURSES. *By Harry Sturgeon Crossen, M.D., F.A.C.S., Professor of Clinical Gynecology, Washington University Medical School, and Gynecologist in Chief to the Barnes Hospital, and the Washington University Dispensary; etc. With 365 Engravings. Including One Color Plate. St. Louis: The C. V. Mosby Co.* 1927. *Price* $2.75.

Dr. Crossen's works on gynecology are well known. The present book, designed for the instruction and guidance of nurses, is based on the standards adopted in the gynecologic service of the Barnes Hospital and the Washington University Dispensary, St. Louis, with which the author is connected.

The text is divided into two parts. Part I presents a brief survey of pelvic anatomy and physiology, of gynecologic disease and of the methods employed in gynecologic examination, diagnosis and treatment. Part II presents the details of gynecologic nursing in its various phases, including preparation for and assistance during pelvic examinations and operations; also the aftercare in abdominal and vaginal operative cases.

The volume is profusely and excellently illustrated and is likely to become a standard for those who are particularly interested in the subject of gynecologic nursing.

INTERNATIONAL CLINICS

INTERNATIONAL CLINICS. *A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles by Leading Members of the Medical Profession Throughout the World. Volume I, Thirty-Eighth Series,* 1928. *Philadelphia and London: J. B. Lippincott Co. Price* $3.00 *per volume;* $12.00 *per year.*

The March, 1928, number of this excellent serial contains 9 papers on general diagnosis and treatment; 3 on medicine; 2 on pediatrics; 11 on surgical subjects, including otolaryngology and ophthalmology; and 4 other papers on miscellaneous subjects. Fourteen of the papers are by foreign authors.

From the mass of clinical material it is difficult to pick out anything which is outstanding where all is excellent. We would, however like to mention the papers on bacterial heart disease by Dr. W. D. Reid, of Boston; the short paper or red cell sedimentation reaction in some acute infectious conditions and in diseases of the joints, by Dr. A. Westergren, of Stockholm; and the paper on uterine fibroid, by Dr. J. B. Deaver, of Philadelphia..

The volume contains the 1927 Mütter lecture on the pathogenesis of gastric and duodenal ulcers, by Dr. E. Starr Judd, of Rochester, Minn.

JOHNSON: FISHING STORIES

REMINISCENT TALES OF A HUMBLE ANGLER. *By Dr. Frank Mackie Johnson. Introduction by Dr. James A. Henshall. Cincinnati, Ohio: Stewart Kidd Company.* 1921. *Price* $1.50.

The first book on fishing was written by a woman and published in 1496. The most complete and elaborate treatise on the subject was the work of the author of this little volume, a practicing physician.

Here one will find the kind of stories one enthusiastic fisherman recounts to another by the camp-fire, told in a simple, pleasing, conversational style, and giving enough details so that it is a workable manual of technic.

This is just the kind of book to carry in the pocket of one's fishing jacket (it is of a size convenient for that purpose) and read while smoking a pipe after lunch. Every true fisherman will enjoy it hugely, and even those who do not fish (poor souls!) will find much to interest and amuse them.

CONSERVATIVE PROCTOLOGY

TRANSACTIONS OF THE ACADEMY OF CONSERVATIVE PROCTOLOGY. *Fourth Annual Session, Chicago, Illinois, August* 4, 5, 6, 1927. *Compiled by Geo. L. Dickerson, M.D., Editor-in-Chief, O. B. Longenecker, M.D., Henry F. Alexander, M.D., C. H. Charles, M.D., and Lindsay Morrison, M.D., Publication Committee. Jacksonville, Fla.,* 123½ *Main St.: Dr. Geo. L. Dickerson,* 1927. *Price* $5.00.

The Academy of Conservative Proctology is the late Dr. J. D. Albright's Ambulant Proctology, with a new and better name, and those who enjoy attending the meetings of that organization will like this report of its 1927 meeting.

This little book of less than 150 pages of text matter (exclusive of preface, resolutions and other business matters) contains a rather complete transcript of the talks and discussions, almost exactly as they were presented, except that the talks on advertising and other business matters are summarized. The style is highly colloquial. It can hardly be classed as a scientific contribution, but contains many practical clinical suggestions, in the form one would get them during an informal chat with a group of physicians.

Considering the size and subject matter of the book, the price seems decidedly high,

but it is probable that those who are interested in doing rectal work in the office can get their money's worth out of it.

BARRINGTON-WARD: ABDOMINAL SURGERY OF CHILDREN

THE ABDOMINAL SURGERY OF CHILDREN. *By L. E. Barrington-Ward, Ch.M., F.R.C.S. (Edin.), F.R.C.S. (Eng.), Surgeon, Hospital for Sick Children, Great Ormond Street; Senior Surgeon, Royal Northern Hospital, London. London, New York, etc.: Humphrey Milford, Oxford University Press.* 1928. *Price* $4.50.

Today it is generally recognized that there are many special conditions in children which differentiate their medical and surgical treatment from that of adults.

The author believes that such a distinction holds for surgical diseases of the abdomen; hence the present book which is based especially on his long surgical connection with one of the large London hospitals for children.

There are 14 chapters dealing with the surgery of all the abdominal organs; and, when necessary, the conditions described are illustrated, most of the drawings being original.

It will rather surprise many that the author should think, in regard to preoperative preparation, that experience shows that the unprepared casualty from the streets provides the best operative material and gives the best operative results.

While the book is specially intended for those engaged in pediatric practice, the general practitioner can also derive considerable benefit from its perusal.

ARUNDALE: NIRVANA

NIRVANA. *By George S. Arundale. Wheaton, Ill.: The Theosophical Press.* 1926. *Price* $2.25.

The word, nirvana, carries little if any clear and direct meaning to the Western mind, and perhaps comparatively few Orientals really understand its sense in any detail. Most people who think of it at all believe it to mean an obliteration of consciousness and the entire loss of individuality. In any case, an experience of nirvana must so far transcend any ordinary human experience as to be practically untranslatable in the terms of human expression.

In spite of the fact that this book might be termed an attempt to express the inexpressible, Bishop Arundale has really accomplished something well worth while and has actually given to sincere students some conception of what the spiritual world is like.

Intuition, he says, brings a complete knowledge and acceptance of the brotherhood of all living beings. Nirvana goes a step further and makes us realize our complete *unity* with every creature.

Nirvana is *light*, and entering this state we recognize the Sun as a great Being, who is, in all essentials, like ourselves, but further developed. It is a state of consciousness (like "Heaven"), not a place.

In Nirvana one does not lose consciousness, but consciousness is enormously expanded and quickened. One senses divinity *within*, and also recognizes it in all things, both animate and inanimate.

And one *works*, much more constantly and powerfully than ever before, but the work is *impersonal*—done for its own sake or for some high ends but dimly perceived, and not for individual aggrandizement or any selfish motive.

Like all increases of power and vision, it brings its dangers, for responsibilities increase with every increase of opportunity. All reactions are magnified, in proportion to the increase in one's outlook. What yesterday caused only a ripple of the surface, is today a mighty storm, shaking one's being to its depths.

It is a transcendental book—a mystical book; rather complete foolishness to one who has given such matters little or no respectful attention; over the heads, even, of many sincere but rather superficial students of occultism; but containing much seed which may grow a rich harvest in the heart of him who reads with an open mind and an alert imagination.

By no means a work for the hurried, careless or scornful reader, but of large value for the comparatively few who are ready for it.

SAHLI: CLINICAL DIAGNOSIS

LEHRBUCH DER KLINISCHEN UNTERSUCHUNGSMETHODEN. *Für Studierende und praktische Ärzte. Von Prof. Dr. H. Sahli, Direktor der medizinischen Universitätsklinik in Bern. Siebente, umgearbeitete und ergänzte Auflage. I. Band. Mit 528 teilweise farbigen Textabbildungen. Leipzig und Wien: Franz Deuticke.* 1928. *Price Mk.* 26.

The first half of Volume I of the new edition of Professor Sahli's well known book on clinical diagnosis was mentioned in CLINICAL MEDICINE AND SURGERY, March, 1928, p. 223. This is the second half of the same volume and completes the diagnostic methods for diseases of the thoracic organs and upper digestive tract.

ABDERHALDEN: LABORATORY TECHNIC

HANDBUCH DER BIOLOGISCHEN ARBEITSMETHODEN. *Von Geh. Med.-Rat. Prof. Dr. Emil Abderhalden. Abt. V, Methoden zum Studium der Funktionen der einzelnen Organe des tierischen Organismus, Teil* 8, *Heft* 1. *Funktionen des Kreislauf- und Atmungsapparates (Ergänzung zu Abt. V, Teil* 4). *Aloys Müller-Freiburg (Schweiz): Einführung in die Mechanik des Kreislaufes. Mit einem Anhange von P. Lambossy-Freiburg (Schweiz). Mit* 106 *Abbildungen. Berlin N* 24, *Friedrichstrasse* 105b: *Urban & Schwarzenberg.* 1928. *Price Mk.* 13.

Dr. Müller's monograph is a supplement

to Part 4 of Section V of Abderhalden's general book. The physical laws dealing with the dynamics of liquids flowing through tubes are given in detail, to explain the mechanics of the circulation.

The monograph is suitable only for those who can follow the abstruse mathematical calculations which are necessary to prove the laws referred to. It is for laboratory workers rather than clinicians.

FELDMAN: CHILD HYGIENE

THE PRINCIPLES OF ANTE-NATAL AND POST-NATAL CHILD HYGIENE. *By W. M. Feldman, M.D., B.S., M.R.C.P. (Lond.), F.R.S. (Edin.), Senior Physician to St. Mary's Hospital for Women and Children, etc. With* 161 *Illustrations and* 14 *Plates, including over* 100 *Portraits. London: John Bale, Sons & Danielsson, Ltd.,* 83-91, *Great Titchfield Street, W.1.* 1927. *Price* $7.00.

This comprehensive work is intended by the author as a companion volume to his book on "The Principles of Ante-Natal and Post-Natal Child Physiology." It covers every phase of child hygiene, from intrauterine life up to the time of adolescence.

The book is divided into three main parts. Part I deals with the history, ancient and modern, of child hygiene; with child biometrics and with infant and maternal mortality.

Part II deals with ante-natal hygiene, and Part III, which occupies by far the greater part of the book, covers the details of post-natal hygiene in every aspect.

The book bears evidence of a vast amount of conscientious labor and research on the part of the author, and contains a wealth of information of value to pediatricians and to all who in any way are interested in the subject of child welfare.

As a book of reference it should be in every public and medical library.

DANA: MEDICAL HISTORY

THE PEAKS OF MEDICAL HISTORY. *An Outline of the Evolution of Medicine for the Use of Medical Students and Practitioners. By Charles L. Dana, A.M., M.D., LL.D., Professor of Nervous Diseases, Cornell University Medical College, Ex-President of the New York Academy of Medicine, etc. Illustrated with* 43 *Full-Page Plates and* 16 *Text Illustrations. Second Edition. New York: Paul B. Hoeber, Inc.* 1928. *Price* $3.00.

The author's idea in writing this short outline of the history of medicine was to present to the student the "high spots" in the evolution of medicine, so that a visualization of the whole subject could be obtained in a short time, leaving the details to be filled in from other sources later, when desired.

The object is achieved. The salient facts are presented in such a manner as can only be done by one who himself possesses a full knowledge of the vast subject and can justly evaluate what to include and what to omit.

To those who love a finely printed and well made book, for its own sake, this little volume will also have an appeal. The paper, type, illustrations and binding are excellent.

SMITH: ALUMINUM IN FOODS

ALUMINUM COMPOUNDS IN FOODS. *Including a Digest of the Report of the Referee Board of Scientific Experts on the Influence of Aluminum Compounds on the Nutrition and Health of Man. By Ernest Ellsworth Smith, Ph.D., M.D., Fellow and Former President, New York Academy of Sciences, New York: Paul B. Hoeber, Inc.* 1928. *Price* $7.00.

A good deal of honest differences of opinion among experts has existed, and possibly still exists, regarding the injurious or other effects of alum in food stuffs. There are so many varying factors entering into the question that it is difficult to lay down definite scientific conclusions.

Dr. Smith's book is apparently the result of a wide study of this whole subject. The question that more particularly affects the medical profession is whether or not harm may arise from the use of alum baking powders. Dr. Smith enters very fully into this and gives the evidence, pro and con, offered at various legal test trials.

It appears that the amounts of compounds of aluminum added to food from baking powders will ordinarily slighlty increase aluminum ingestion; but it seems also apparent that this addition is only a fraction of the amount of aluminum that can be ingested in the form of aluminum compounds occurring naturally in the common foods and does not exceed or equal the amount that is biogenetically necessary. Alum baking powders therefore cannot be regarded as dangerous to health.

This book contains a vast amount of information on the alum controversy that will be valuable to physicians, chemists and others interested in the subject.

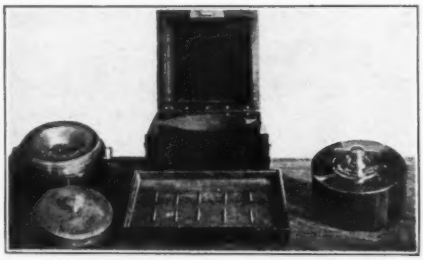
BARKER: THE YOUNG MAN AND MEDICINE

THE YOUNG MAN AND MEDICINE. *By Lewellys F. Barker, M.D., LL.D., Professor Emeritus of Medicine, Johns Hopkins University. New York: The Macmillan Company.* 1928. *Price* $2.50.

Professor Barker's monograph is a guide for young men who may be thinking of selecting the medical profession as the scope of their life work. The aims, outlook and rewards in the practice of medicine or in the teaching or research branches are clearly stated.

The book is one of a vocational series for young men in deciding upon a calling.

Medical News



Courtesy of *Medical Life.*

Mme. Curie's Gram of Radium.

A GRAM OF RADIUM

When Mme. Curie was in the United States, a year or two ago, the women of this country raised the money (nearly $100,000) to present her with a gram of radium.

The picture shows the radium, in the glass tubes, each containing 0.1 Gm. of pure radium bromide, together with the lead container and case in which this precious but very dangerous substance is kept, and gives an idea of the precautions which must be used when handling it. The container and case weigh 112 pounds.

MEDICAL AND PHYSICAL THERAPY EXPOSITION IN MEXICO

Under the auspices of all the medical and many of the important lay organizations in Mexico, and sponsored by President Calles, an exposition covering all fields of medicine and the allied sciences, including physical therapy, will be held in Mexico City during October, 1928.

Those who are interested can obtain full information by addressing the Managing Director of the Exposition, Apartado 982, Mexico, D. F.

PHYSICAL THERAPY MEETING

The American College of Physical Therapy will hold a one-day scientific session, June 11, 1928, at the Hotel Radisson, Minneapolis, Minnesota. This is just prior to the active meeting of the American Medical Association. The purpose of the one-day session is to stimulate greater interest in education in physical therapy, and also to emphasize the significance and value of the application of physical agents in the various specialties. An excellent program has been arranged.

Physicians desirous of acquainting themselves with some of the newer phases of physical therapeutic methods will find this one-day meeting of great interest. Fellows and visitors of the American Medical Association are cordially invited. On the evening of June 11, there will be a college dinner and prominent leaders in physical therapy will offer addresses of special interest to all those engaged in physical therapy work.

INSTRUCTION IN PHYSICAL THERAPY

A postgraduate course in physical therapeutics (Physical therapy—medicine 18a) will be given at Indiana University the six weeks starting with June 14, 1928. It will be both didactic and practical, the latter work being done upon patients of the University and Indianapolis City Hospitals. Plenty of clinical work is available. Special opportunity for laboratory investigations may be obtained. The work will be under the direction of Dr. Edwin N. Kime, director of physical therapeutics, Indiana University and Indianapolis City Hospitals, and president-elect of the Western Physical Therapy Association.

LEADERSHIP

In the judgment of two eminent college deans, Dean Mildred Thomspon, of Vassar, and Dean Ernest Wilkins, of the University of Chicago, only those who show a marked aptitude for study and who possess the qualities of leadership, should be admitted to our already over-crowded American colleges.

Dean Wilkins would admit only potential leaders. He says that potential leadership may be judged on the following essentials: Technical ability (workmanship, dexterity); power of expression; accuracy of observation; perseverance; power of concentration; sense of proportion (including

a sense of humor); intellectual curiosity; power of initiative; ability to reason; health of body; appearance; manner (bearing); attractiveness (charm); ability to cooperate; moral cleanness; honesty; faith in knowledge; purposefulness; vision and social mindedness.

OTHER PLACES

We long for purple distances
Seen only from afar,
We think we want the nearness
Of a million pointed star,
And reason is unreason
While we are what we are.

Kathleen Millay.

Courtesy of Boni & Liveright.

Reproduction of a photostat of the first poem "published" by radio.

PHOTO-RADIO "PUBLICATION"

The first piece of literature ever sent over the air without the aid of the human voice or telegraphic wires was a poem by Kathleen Millay, flashed from New York to Washington in April by photo-radio engineers in secret tests of a new device. Miss Millay is a sister of Edna St. Vincent Millay and the author of a book of poems, "The Evergreen Tree".

This was the first "publication" of the poem, since it had never appeared in print.

THE WM. S. MERRELL CO. ELECTS 2ND VICE-PRESIDENT

Mr. Mortimer Bye, scientific director of the Wm. S. Merrell Co., has recently been elected 2nd vice-president of that organization. His training and experience fit him especially well for the position he occupies.

ANOTHER MARTYR TO ANESTHESIA

The Jan.-Feb., 1928, number of *Current Researches in Anesthesia and Analgesia* is issued as memorial number to the late Dr. Sidney Rawson Wilson, distinguished British research worker in anesthesia. Dr. Wilson died following personal experiments on himself with nitrous oxide-ether analgesia. He was found dead in his study with the face mask still in position and the oxygen cylinder exhausted.

SKELETON WANTED

If any of our readers has a reasonably good skeleton which he is not using for his personal requirements and which he no longer needs he may be able to dispose of it advantageously by writing to Dr. S. R. Goedman, 968 St. Paul St., Rochester, N. Y.

THE NEW ENGLAND JOURNAL OF MEDICINE

We offer our congratulations to an old and highly esteemed contemporary under a new name.

In February, 1928, the *Boston Medical and Surgical Journal* celebrated a century of sincere and valuable service to the medical profession, and deemed this a fitting time to broaden its scope to embrace all of New England and to change its name accordingly.

So, while the title on the cover is new, the contents will be the same type of useful material we have learned to expect, for Dr. Walter P. Bowers, who, for many years has been its editor, will continue in charge.

CIVIL SERVICE OPPORTUNITIES

The U. S. Civil Service Commission has just issued a booklet fully describing the opportunities for medical and hospital work under its jurisdiction and giving details of duties and remuneration.

Physicians, technicians, nurses and others who are interested can obtain a copy of this booklet by addressing the Commission, at Washington, D. C.

GOITER ASSOCIATION TO MEET

The American Association for the Study of Goiter will hold its annual meeting at Denver, Colo., June 18, 19 and 20, 1928.

An excellent program of scientific papers and clinics by authorities in these lines, has been prepared and the meeting should prove profitable to those especially interested.

Further information may be obtained from Dr. C. F. Kemper, Metropolitan Bldg., Denver, Colo.

Send for This Literature

To assist doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physicians' supplies, foods, etc., CLINICAL MEDICINE AND SURGERY, North Chicago, Ill., will gladly forward requests for such catalogues, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our readers may use these numbers and simply send requests to this magazine. Our aim is to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physicians' use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment or medical supplies. Make use of this department.

F- 1 Helping the Cell to Help Itself. 32-page booklet by The Alkalol Co.

F- 2 Your Prestige and Profit. 8-page booklet. The Carroll Dunham Smith Pharmacal Co.

F- 3 Storm Binder and Abdominal Supporter. 4-page folder by Dr. Katherine L. Storm.

F- 4 Pluto Water. Its Medicinal Values. 16-page booklet. French Lick Springs Hotel Co.

F- 5 Ethical Medicinal Specialties. 8-page booklet. A. H. Robins Co.

F- 6 The Journal of Organotherapy. 95-page booklet published monthly. G. W. Carnrick Company

F- 7 The Cure of Cystitis, Pyelitis and other inflammatory Conditions of the Urinary Tract. Chicago Pharmacal Co.

F- 9 Hang This Up—It Tells How to Make Percentage Solutions. Sharp and Dohme.

F- 14 The New Ultra-Violet Therapy. McIntosh Electrical Corporation.

F- 17 An Index of Treatment. Burnham Soluble Iodine Co.

F- 20 A Survey of Focal Infection. Fellows Medical Co.

F- 29 The Blood Picture. The Wilson Laboratories.

F- 37 pH 7.4, Alka-Zane. Wm. R. Warner & Co., Ltd.

F- 38 Hycol. The Certified Disinfectant. Merck & Co.

F- 39 A Convincing Solution of an Old Problem, Isacen. The Hoffmann-La Roche Chemical Works.

F- 40 Truth Spreads by Testimony, Isacen. The Hoffmann-La Roche Chemical Works.

F- 41 The Specific Treatment of Pneumonia with Numoquin Base. Merck & Company.

F- 42 Detoxification in the Treatment of Infection. The Wm. S. Merrell Company.

F- 43 "Humanize" Cow's Milk. The Wm. S. Merrell Company.

F- 45 Vera-Perles of Sandalwood Comp. Paul Plessner Co.

F- 46 Bedtime Nourishment. Mellin's Food Co.

F- 47 Campho-Phenique in Major and Minor Surgery. Campho-Phenique Co.

F- 49 The Calcreose Detail Man. Maltbie Chemical Co.

F- 50 Outwitting Constipation. Standard Oil Co.

F- 51 The Ideal Anti-Gonorrheic. Riedel & Co., Inc.

F- 52 Cre-So-Mul. First Texas Chemical Mfg. Co.

F- 56 Regaining Health. How Science Can Guide You! The Fleischmann Co.

F- 58 The Pharmacology of Cod Liver Oil. Smith, Kline & French Co.

F- 65 Siomine (Methenamine Tetraiodide) $C^6 H^{12} N^4 I^4$ 78.5% Iodine. Pitman-Moore Company.

F- 67 The Electro-Pathology of Local Inflammation. The Dionol Company.

F- 70 Yeast Therapy. The Fleischmann Company.

F- 78 Nourishment for Adults and Children in Health or Illness. Mellin's Food Co.

F- 82 Service-Suggestions, May-June, 1928. Victor X-Ray Corp.

F- 84 Latent Constipation—A Diagnostic Problem, Agarol. Wm. R. Warner & Co.

F- 85 Ultraviolet for Health. Hanovia Chem. & Mfg. Co.

F- 87 Journal of Intravenous Therapy. Loeser Laboratory.

F- 93 Britesun Therapeutic Booklet. Britesun, Inc.

F- 94 A Compendium of Glandular Therapy. Colwell Pharmacal Corporation.

F- 95 Everything for the Sick—Lindsay Laboratories.

F-103 The Electron. McIntosh Electrical Corporation.

F-106 Acidosis as a Complication in Winter Diseases. William R. Warner & Co.

F-110 When Colds Hang on and Coughs are Stubborn. The Hoffmann-La-Roche Chemical Works.

F-112 Atophan after more than Fifteen Years of ever expanding use, etc. Schering & Glatz.

F-113 Forcep Deliveries and Versions. Battle & Co.

F-114 Infra Red Therapy. Britesun, Inc.

F-115 Diagnosis of Sterility in the Male and Female. Reed & Carnrick.

F-116 Hemo-Glycogen, The New Product of Hemoglobin Compound and Liver Extract. Chappel Bros., Inc.

F-120 Building Resistance. William R. Warner & Co., Ltd.

F-122 Cardiazol, an Emergency Stimulant and Sustaining Agent for the Heart. E. Bilhuber, Inc.

F-127 The Surgical Treatment of Goiter. The C. V. Mosby Co.

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